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From semantic weight to legal ontology via classification of concepts in legal texts

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ABSTRACT
A difficulty with legal vocabulary is that concepts in different legal systems map imperfectly to each other, particularly from common law systems where classification is often unclear or convoluted to codified civil systems. Even within the English language domain there are numerous legal systems where concepts differ, e.g. between Scotland and England. This causes significant problems for students', especially foreign language students', reading comprehension and developing understanding of legal lexis where translation dictionaries, while they may be efficient, are imperfect. This article sets out a classification approach to reading and English language legal concept deep under-standing rooted in theories from education and cognitive linguistics, in particular Categories and Prototypes, Schema theory, and Legitimation Code Theory (LCT). I have used the approach successfully for some years with international students studying law in Scotland, assisting their reading of textbooks and especially journal articles while building domain knowledge. The application of the strategy is presented in the context of research on the adoption of reading strategies which finds that adoption is influenced by awareness of the complexity of the concepts in the text, complexity of the strategy, and by how much particular strategies are seen as a valid method in legal study.

Introduction

International students are becoming an increasingly vital market in the UK, among other English-speaking countries, with numbers continuing to increase.[1] Support is widely provided for these students via additional language and skills provision. However, there is a problem in such additional language and skills provision if the support teachers are not prepared for subject specificity and for the disciplinary differences and expectations in their audience.[2] The concomitant of this problem is

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the willingness or ability of subject teachers to satisfy the language and skills needs themselves.[3]

This article aims to respond to one element of this problem: supporting law students to improve reading, specifically the development of understanding and analysis of key concepts, whether the subject teacher considers these concepts complex or not (the fact is that the student may not agree). The reading and understanding of this legal content language is examined here within journal articles, and to some extent textbooks too (we are looking at knowledge construction from *descriptive texts*, to use terminology employed by Kjær[4]). These have been chosen because of their prevalence on law school reading lists and students will spend a significant proportion of their study time with these "secondary sources". The article is aimed not just at those supporting international students, eg in English language provision such as English for Academic Legal Purposes (EALP), but at subject teachers who work with international students.

The article begins with an overview of some of the issues when operating across different legal systems, particularly translation and differing paradigms. There then follows, in section 2, some context from education literature, including second-language learning, on reading strategies and reading literacy to highlight the importance of literacy training that includes teaching of discipline-specific reading strategies.

Section 3 provides an example of the pedagogical approach/strategy I refer to as *conceptual classification*: an approach to developing (and adjusting pre-existing assumptions on) content knowledge in respect of disciplinary concepts, while also improving reading comprehension and memory. Section 4 briefly highlights what we know about students' attitudes to reading and reading strategies to provide practical advice on how to encourage adoption of conceptual classification or any other reading strategy.

Finally, section 5 provides support for the strategy via an overview of its main linguistic and educational underpinnings to explain its theoretical value for the teacher and scholar: these are cognitive architecture and *categorisation* (which involves *prototype theory*), *schema theory* and *legitimation code theory*.

1. Problems for comprehension: different expectations when reading in different systems

Hard sciences and soft sciences, a common enough demarcation, see the realm of beliefs and knowledge (ontology) and how we form knowledge (epistemology) rather differently. Collectively ontology and epistemology create paradigms that are obvious or explicitly referred to in the context of research methodology, eg for a hard-scientist, empirical, for a sociologist perhaps interpretivist, and are to a very large degree international. However, we are unlikely to encounter the term "paradigm", in this meaning of

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[3]Jenna Bodin-Galvez and Alex Ding, "Interdisciplinary EAP: Moving beyond Aporetic English for General Academic Purposes" (2019) 4 The Language Scholar 78. A related area of interest is the growth of English Medium Instruction (EMI), ie subject teaching through English in non-Anglophone education systems which, it is argued, has many of the same challenges, eg see Nicola Galloway and Heath Rose, "English Medium Instruction and the English Language Practitioner" (2021) 75 ELT Journal 33.

[4]Anne Lise Kjær, "On the Structure of Legal Knowledge: The Importance of Knowing Legal Rules for Understanding Legal Texts" in Lita Lundquist, and Robert J. Jarvella (eds), *Language, Text, and Knowledge: Mental Models of Expert Communication* (Mouton de Gruyter, 2000) 127.

the word, in law. Law's relationship with science, even if it can be considered on the "soft" end of science, is unsettled, with law having been described as "dialectical, idealistic, nontechnical, value-laden and humanistic".[5]

Paradigms, one can argue, are subsumed by the widest and most theoretical area of legal education, *jurisprudence*, but this is typically a distinct area of study in the UK. Law journal articles are unlikely to make their paradigms obvious. Similarly, in the classroom, many law teachers may take paradigms for granted. With the global reach of the *Anglican tradition*,[6] this is perhaps understandable. However, a problem arises if an international student does not come from the same paradigm and does not have the familiarity the writer or teacher assumes; in comparative law literature, although the word "paradigm" will likely not appear, it is increasingly accepted that different legal systems contain differences that go beyond legal rules, roles, institutions and vocabulary, to include different styles, modes of thought, ideologies, histories, or in other words, a "hidden conceptual, ideological framework".[7] Coming from a different jurisdiction, the systems international students have knowledge of are not the same and neither are their paradigms. Such students must adjust to new conceptual frameworks and realities (new ontologies): does a concept exist in their own system; if so, why, and is it the same as in the system within which they are now studying? It is imperative that all law students, but especially those studying law at postgraduate level in different countries from where they were undergraduates, are aware of different realities and are able to orientate themselves to these. "The elucidation of the meaning, significance and use of . . . fundamental legal conceptions" is part of jurisprudence and should be part of legal education.[8] While there may be different schools of jurisprudence that place different emphases on legal language, and its contexts (ie the different systems), and interpretation (compare, for example historical jurisprudence and the analytic form favoured by influential jurists such as Dicey in England[9]), all legal study, and related language study, accepts the need for a deeper interpretation of often very vague legal concepts.

Understanding concepts is, of course, critical to any of the humanities and social sciences, whether it be *hedging* in investment and finance, *attribution* in social psychology, and so on. Law, often associated with these disciplines, is no different in that sense. However, what makes legal concepts *legal* is that they have legal consequences within and in accordance with a particular legal system; because they include legal rules; because legal traditions, principles and doctrines act on them and change concepts that might be common or everyday concepts into legal concepts.[10] For example, informally we might speak of business entities such as *companies*, but only a company satisfying certain formalities and conditions in a UK legal system will be rightly called a company in Scotland or England and lead to a whole host of very specific legal rights and duties. For a foreigner this is equally if not even more problematic since "the level of difficulty of a legal translation does not primarily depend on linguistically determined

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[5]Howard T Markey, "Jurisprudence or 'Juriscience'" (1984) 25 William & Mary Law Review 525, 527.
[6]Peter Goodrich, "Intellection and Indiscipline" (2009) 36 Journal of Law and Society 460.
[7]Mark Van Hoecke and Mark Warrington, "Legal Cultures, Legal Paradigms and Legal Doctrine: Towards a New Model for Comparative Law" (1998) 47 International & Comparative Law Quarterly 495, 497.
[8]David M Walker, *The Scottish Legal System: An Introduction to the Study of Scots Law* (W Green 1992) 53.
[9]Mark D Walters, "Dicey on Writing the *Law of the Constitution*" (2012) 32 Oxford Journal of Legal Studies 21.
[10]Walker (n 8).

differences, but rather on structural differences between legal systems".[11] Legal language is "system bound, tied to the legal system rather than to language".[12]

Examples are well-enough known to legal translators and those interested in comparative law: the lack of "identity of concept" between the French terms *fraude* and *évasion* in relation to tax *avoidance* and *evasion* as understood in the UK,[13] and the absence of the concept of *trust* in many jurisdictions compared to its existence and meaning in English law,[14] are two of a myriad of examples. Perhaps more obviously pertinent to the approach to reading strategies that is set out in section 3 is the way that important concepts are categorised or classified. For example, the concept of a company in the UK (as distinct from a partnership for example) does not exist within the category of business entities in the same way recognised by French law, though the French *société* would seem similar on superficial viewing.[15]

This problem may be exacerbated by the expectations of foreign learners of legal English. Coming from a civil law system, they might expect the origin to be clearly stated in legislation or a code, or indeed the origins to be the same, eg from Roman law. However, let us consider an example to illustrate the difficulties here. In the UK, companies have their origin partly in the conceptualisation of legal personality, partly in trusts (which we have already mentioned is a problematic concept in itself), partly in associations, and also in contract, yet most company law texts devote almost no attention to the theoretical conception of a company and are more concerned with business, ie investment and return on investment, and operations.[16] In France the nature or origin of the company may not be hugely different (primarily about contract, and then the concept of institution), yet the degree of importance and emphasis on these aspects or their origins differs.[17] Bear in mind at the same time that common law systems are rarely as systematised (consolidated or codified) as the civil law systems.

It is also important for the reader to be clear that in common law systems, as part of their paradigm (and here we begin to see epistemology), legal interpretation and analysis is often via inductive processes heavily based on court cases. The student of law will read many books and journal articles where this has already been done and indeed black-letter research (doctrinal research), where such interpretation and analysis is the main focus, is the most common form of legal research,[18] and hence commonly what we see published in journals. So it is rare that a student can apply some form of template, whether specific to an area of law or generic across the field or whole legal system, to determine the meaning of concepts in common law jurisdiction texts. Instead, the law student must understand the concept as it is used, which in terms of common law systems can be thought of as "bespoke"[19] and in language philosophy can be thought of as *semantic*

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[11]Gerard-René de Groot in Guido van Dievoet, "Vertalen binnen een tweetalig rechtssysteem (België); Wetgeving in het Nederlands en het Frans." Recht en vertalen. (Deventer: Kluwer 1987) cited in Marcus Galdia, "Comparative law and legal translation." The European Legal Forum. Vol. 1. 2003.

[12]Sieglinde Pommer, "Translation as intercultural transfer: The case of law." SKASE Journal of Translation and Interpretation 3.1 (2008): 17–21 cited in Juliette R Scott, Legal Translation Outsourced (Oxford University Press 2019) 40.

[13]Peter Harris, "*Abus de Droit* in the Field of Value Added Taxation" [2003] British Tax Review 131.

[14]Susan Sarcevic, *New Approach to Legal Translation* (Kluwer Law International BV 1997).

[15]Nicholas Foster, "Company Law Theory in Comparative Perspective: England and France" (2000) 48(4) The American Journal of Comparative Law 573.

[16]ibid.

[17]ibid.

[18]Terry Hutchinson and Nigel Duncan, "Defining and Describing What We Do: Doctrinal Legal Research" (2012) 17 Deakin Law Review 83.

[19]Thomas Giddens, "A Series of Unfortunate Events or the Common Law" (2021) 33 Law & Literature 23.

holism[20] – the language means what the context makes it mean. For foreigners, this is a critical point: "the worlds in which different societies live are distinct worlds, not merely the same world with different labels . . . perfectly exact legal translations are impossible".[21] This is a reminder of why quick resort to other texts including dictionaries and translation is risky. Of course the law expert must have recourse to primary sources and a variety of secondary sources, but one must know what each writer means and not assume there is an objective reality rather than an "evolving praxis".[22]

Having considered the importance of paradigms, particularly ontology and the lack of identity of concept, when expecting foreign students to approach journal articles, there is one other relevant element of comparison to consider for the foreign student; this element is not commonly considered within comparative law and comes via a field called genre analysis, most associated with Swales and his work exploring linguistic patterns and commonalities linked to communicative purpose of different texts.[23] The core meaning of genre we are interested in here is that of a text type (genre) being created on account of the writers' (or that community of writers'/discourse community's) purpose.[24] Readers build expectations within genres such as what function an introduction performs – setting the context, setting the article aims, and so on. What if genre expectations do not match what the text actually does? Readers have more difficulty following the message. One aspect of this may have been apparent from the earlier point regarding scientific research and publishing contrasted with law and the latter's lack of reference to paradigms.

Genre analysis of law journal articles has not, to my knowledge, examined macro-structural elements of discourse:[25] structure such as functions of multi-paragraph sections of academic law texts, as opposed to the more common investigations into lexico-grammatical elements or into professional genres (see for example Goźdź-Roszkowski[26] and Bhatia,[27] among others). Law articles falling into the category of empirical research, often known as socio-legal research, have been examined within the IMRD (introduction – method – results – discussion) structure[28] but I am not aware of a similar framework associated with black-letter research, typical in law journal

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[20]Ernest Lepore and Barry C Smith, *The Oxford Handbook of Philosophy of Language* (Clarendon Press 2008). Semantic holism is perhaps most associated with Quine and its meaning here is taken very loosely – that meaning requires a cultural context or orientation, together with the writer's intention, sometimes found together with semantic field theory, eg Eva Feder Kittay, "Semantic Field Theory" in Eva Feder Kittay, *Metaphor: Its Cognitive Force and Linguistic Structure* (Oxford University Press 1990; online edn, Oxford Academic 2011); however, semantic holism can be traced to Wittgenstein and in legal philosophy, most clearly linked to Hart's work, eg Definition & theory in jurisprudence: an inaugural lecture delivered before the University of Oxford on 30 May, 1953" (Oxford, 1953).

[21]Thomas Lundmark, *Charting the Divide between Common and Civil Law* (Oxford University Press 2012) 20.

[22]Giddens (n 19) 29.

[23]John Swales, *Genre Analysis: English in Academic and Research Settings* (Cambridge University Press 1990).

[24]See for example, Carolyn R Miller, "Genre as Social Action" (1984) 70 Quarterly Journal of Speech 151.

[25]I use this term advisedly as the terminology is highly complex, eg see Teun A Van Dijk, *Macrostructures: An Interdisciplinary Study of Global Structures in Discourse, Interaction, and Cognition* (Erlbaum 1980).

[26]Stanislaw Goźdź-Roszkowski, "Variation across Disciplines and Genres: A Preliminary Multi-Dimensional Analysis" in Barbara Lewandowska-Tomaszczyk (ed), *Corpus Linguistics, Computer Tools, and Applications – State of the Art: PALC 2007* (Peter Lang 2008) 365.

[27]Vijay Kumar Bhatia, *Analysing Genre: Language Use in Professional Settings* (Routledge 2014).

[28]Girolamo Tessuto, "Generic Structure and Rhetorical Moves in English-Language Empirical Law Research Articles: Sites of Interdisciplinary and Interdiscursive Cross-Over" (2015) 37 English for Specific Purposes 13.

articles.[29] The failure of law to fit neatly into a wider discipline such as the humanities[30] limits the transferability of genre analysis in other disciplines.

For black-letter legal writing there is useful starting point to help us consider what the foreign reader may experience that links to the earlier discussion on ontology. Law review notes (a form of student-published research in the USA and which tend to be of the doctrinal/black-letter kind) have been examined in detail revealing a structure beginning with what are referred to as "detailed discussion of a legal situation/background";[31] to use more disciplinary-specific terms on legal method, doctrinal research requires the researcher to initially locate the sources of the law and then interpret and analyse the law (the text(s) stating the law) "attempting to determine an 'objective reality', that is, a statement of the law encapsulated in legislation or an entrenched common law principle".[32] The experienced reader of English language law journal articles from the USA and the UK, for example, knows to pay attention to this determination of objective reality – this *analysis*. They must do so by focusing on understanding the mind of the writer. Reference to external texts will be done in addition (not instead) and those will often be cases or other articles, not law dictionaries. Because legal method/legal analysis and beliefs about the nature of law and legal systems vary across jurisdictions[33] and influence the written genre, it should not be assumed that a Chinese or Thai law student, for example, has the same expectations of descriptive legal text genre: academic law journals must be considered in terms of student expectations, particularly when those students have already formed beliefs from their own legal education. Drawing attention to what a typical law article contains is self-evidently of value since it is clearly part of the teaching of genre awareness.[34] Students need to be aware that, for example, a journal article on company directors' duties may contain at the beginning of the body of the article an overview that incorporates analysis of the term "company" and the term "directors", to some extent summarising a convoluted history of those terms via case law as the writer seeks their own *objective reality*. By contrast, as mentioned earlier, the foreign law student from a civil law system may expect to refer to, or be referred to, the appropriate legal code.

Thus, all of the above is the justification on a comparative law, differing paradigms, basis, bolstered by genre differences, for students using strategies to approach descriptive legal texts, specifically to understand how the writers understand and communicate their concept, especially troublesome when writers do not display conspicuously (from the unsuspecting reader's point of view) the origin and aims,[35] while there is no code to refer to (often not even consolidating legislation to make it easy to locate the relevant law in a single source).

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[29]Terry Hutchinson and Nigel Duncan, "Defining and Describing What We Do: Doctrinal Legal Research" (2012) 17 Deakin Law Review 83.

[30]Jack M Balkin and Sanford Levinson, "Law & the Humanities: An Uneasy Relationship" (2006) 135(2) Daedalus 105.

[31]CB Feak, SM Reinhart and A Sinsheimer, "A Preliminary Analysis of Law Review Notes" (2000) 19 English for Specific Purposes 197, 201.

[32]Hutchinson and Duncan (n 18) 110.

[33]Lundmark (n 21) ch 3.

[34]Louise Spear-Swerling, Pamela O Brucker and Michael P Alfano, "Relationships between Sixth-Graders' Reading Comprehension and Two Different Measures of Print Exposure" (2010) 23 Reading and Writing 73.

[35]See Foster (n 15) as an example in the context of company law.

2. The importance of reading strategies

This section considers the broader educational (secondary and higher) context affecting our understanding of reading strategies, what they mean, and of what value to provide important context for the explanation in section 3 of the reading strategy promoted in this article. The term *strategy* is used here to cover any means of achieving the necessary or most appropriate reading aims or needs.[36] An example would be skimming (a strategy) in order to efficiently understand the main idea (gist) of a text.

The idea of a competent reader has been linked to the configuration of knowledge, strategies and interest.[37] To be most effectively engaged in reading, one must be *strategically engaged*,[38] meaning that knowledge and interest in themselves are not as effective. It is widely accepted that readers either can be taught or should self-develop different processing strategies.[39] Admittedly, reading strategies can be subconscious, but it is believed that the most effective readers are self-aware and self-reflective on their strategy use, being conscious of how well they understand texts in respect of their own goals and consciously employing strategies to improve understanding of difficult texts;[40] this is widely known as meta-cognition.[41] Christensen,[42] in a legal education context, found lower performing students spend more time decoding than considering context and interpretation, and make more assumptions, whereas higher performing students are more self-aware in respect of resolving difficulties as and when they arise and concludes that law teachers should be teaching reading strategies.

In addition to this view on the importance of employing appropriate strategies to improve reading effectiveness, there has been increasing attention paid to reading conceptualised as a literacy,[43] much more than a skill: skill, certainly in a second-language context, is suggestive of core (and transferrable) processes, where vocabulary is one major aspect of linguistic proficiency, eg a matter of comprehending words.[44] By contrast, literacy incorporates the notion of readers interacting "socially with the writer and the writer's society",[45] and configuring knowledge in context. Disciplinary literacy, examining the unique sense-making within academic disciplines,[46] pushes the development of deep content knowledge and literate habits of thinking.[47] Literacy suggests an ability to understand a writer's thinking, aims and assumptions: generally how they

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[36]Neil Allison, "Impediments to the Adoption of Subject Specific Reading Strategies in EAP – Exploratory Practice with Hohfeld's Jural Relations" (2020) 8 Language Scholar 21.

[37]Patricia A Alexander and The Disciplined Reading and Learning Research Laboratory, "Reading Into the Future: Competence for the 21st Century" (2012) 47 Educational Psychologist 259.

[38]Ruth Garner, *Metacognition and Reading Comprehension* (Ablex Publishing 1987).

[39]Robert F Lorch Jr and Paul van den Broek, "Understanding Reading Comprehension: Current and Future Contributions of Cognitive Science" (1997) 22 Contemporary Educational Psychology 213.

[40]Lisa McGrath, Jessica Berggren and Špela Mežek, "Reading EAP: Investigating High Proficiency L2 University Students' Strategy Use through Reading Blogs" (2016) 22 Journal of English for Academic Purposes 152.

[41]National Research Council, *How People Learn: Brain, Mind, Experience, and School* (Expanded edn, National Academies Press 2000).

[42]Leah M Christensen, "Legal Reading and Success in Law School: An Empirical Study" (2007) 30 Seattle University Law Review 603.

[43]Mary R Lea and Brian V Street, "The 'Academic Literacies' Model: Theory and Applications" (2006) 45 Theory Into Practice 368.

[44]Levi McNeil, "Extending the Compensatory Model of Second Language Reading" (2012) 40 System 64.

[45]Allison (n 36) 22.

[46]David Rose and James R Martin, *Learning to Write, Reading to Learn: Genre, Knowledge and Pedagogy in the Sydney School* (Equinox 2012).

[47]Elizabeth Birr Moje, "Foregrounding the Disciplines in Secondary Literacy Teaching and Learning: A Call for Change" (2008) 52 Journal of Adolescent & Adult Literacy 96.

make meaning.[48] There is plenty of theoretical research for the implementation of literacy approaches, though less robust empirical evidence of success (Fang and Coatoam,[49] citing for example Moje[50] and Shanahan and Shanahan[51]). This article adds to this theory-based research: a classification approach to reading. It is theoretically justified not only by the disciplinary positioning described in section 1 but also the pedagogical frameworks outlined in section 4. This article sees the reading strategy set out in section 3 as a technique, as skills frameworks might label it. However, it bridges the skills to literacy gap by virtue of it being a technique or tool that is appropriate and valid within a discipline and a specific text genre: a law journal article. While experts might expect students' literate habits to exist and to naturally develop (and indeed not use, or knowingly use, the strategy set out here themselves), explicit teaching of strategies is promoted within literacy theories.[52]

3. The legal reading strategy – classification

The foundation of this reading strategy comes from one of the key planks of legal study in a common law jurisdiction, that of classification of legal concepts. Walker[53] highlights the importance of classification in legal study in that it permits the scientific examination of its doctrines and principles. As we have seen in section 1, the same classification is not applicable to all legal systems.

As a practical application in the classroom, I have used a classification strategy for reading with both undergraduate and postgraduate students of law, domestic and foreign. As touched on at the end of section 2, the strategy links a skills framework of reading to a literacy framework. This is because it is an adaptation of a reading strategy coined *explicating schema* in the context of arts, humanities and social science reading.[54] The adaptation is by way of extending its basics to the disciplinary and genre specifics of descriptive law texts, particularly journal articles as described in section 1. I have used the approach most often in an in-sessional optional support course (ie non-credit bearing) aimed at international LLM students (Masters in Law), with groups of 20 to 50 students whose nationalities have included a mix of German, Chinese, Thai, French, and many others. Students can attend a series of classes designed to help them adjust to law study in Scotland, though they may be studying a variety of different LLM programmes with different core subjects.

I introduce the classification reading strategy by asking students to define a couple of related concepts from one of their courses, eg "What is corporate governance?" and "What is capital maintenance?" Often such questions are contained in their course seminar handouts as guides for preparation for their classes. Students can next be

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[48]Doug Buehl, *Developing Readers in the Academic Disciplines* (Stenhouse Publishers 2017).
[49]Zhihui Fang and Suzanne Coatoam, "Disciplinary Literacy: What You Want to Know about It" (2013) 56 Journal of Adolescent & Adult Literacy 627.
[50]Moje (n 47).
[51]Timothy Shanahan and Cynthia Shanahan, "Teaching Disciplinary Literacy to Adolescents: Rethinking Content-Area Literacy" (2008) 78 Harvard Educational Review 40.
[52]Rose and Martin (n 46). Also, Christensen (n 42) in the specific context of legal reading in the USA. More recently, Lisa McGrath, Raffaella Negretti and Karen Nicholls, "Hidden Expectations: Scaffolding Subject Specialists' Genre Knowledge of the Assignments They Set" (2019) 78 Higher Education 835.
[53]Walker (n 8) 73.
[54]Neil Allison, "Accessing the Schema of Your Students and the Subject Specialists (Arts, Humanities, Social Sciences)" Addressing the State of the Union: Working Together = Learning Together, Bristol, UK, 7-9 Apr (2017).

Inception of capital maintenance rules

The concept of capital maintenance draws its origins from the desire to encourage more people to invest in entrepreneurial projects. Parliament thought that, by limiting the risks associated with business,[1] a greater number of people would invest in an increased number of companies, thus creating more tax revenues, jobs and a safer society.[2] With the creation of the separate legal entity, through the means of limited liability status, such a policy was implemented. At the foundation of the concept of capital maintenance we find an apportionment of risk upon the shoulders of shareholders. They absorb the potential loss of their investment before the creditors, thus protecting the latter's superior ranking in an insolvency scenario.[3] However, limiting the financial liability of shareholders came at the cost of increasing the level of creditors' risk exposure associated with lending to limited liability companies. The legislator thought that a balanced approach to the issue would be to ensure that the capitalised value of the company would stay constant and reflect the amount of money that the company's shareholders had invested in it.

Such a process ensures that the shareholders' financial risk does not extend beyond the potential loss of the whole of the value of their shares.[4] Furthermore, this process serves as a guarantee to creditors as they can continue to lend to such companies in full awareness that, in the event that a company was declared insolvent, a certain buffer to satisfy their claims would always be present.

Figure 1. Text extract from journal article by Clementelli,[55] taken from the early body of the article immediately after the introduction.

provided with a journal article (or extract) from their reading list that contains information about the concept – see Figure 1 – and instructed in how to build up a classification of the concept. Figure 2 shows a template that students can use for notetaking[56] – the bird example helps students understand the logic while language networks of nouns in the text provide the content, with a completed example shown in Figure 3.

Students might be referred next to the legislation (in the above case, the Companies Act). Alternatively, they may search another text to provide comparison to this writer's classification, or indeed search for another concept, both allowing the strategy to be

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[55]Federico Clementelli, "(Under) Valuing the Rules on Capital Maintenance" (2012) 23 International Company and Commercial Law Review 191.

[56]Note that the linguistic terms *hyponymy* and *meronymy* are for illustration purposes in this article, ie they would not necessarily be helpful for students.

Writer's Classification (hyponymy)	Properties (meronymy) *Essential properties at that level and levels below
Animal	
Bird	*Born from egg *Has wings
Bird of prey	Eats mostly from hunting
Eagle	Has fully feathered head

Figure 2. Template for classification.

Writer's Classification (hyponymy)	Properties (meronymy) *Essential properties at that level and levels below
Entrepreneurial projects	
Risk	
Investment in companies	*separate legal personality *shareholders *limited liability of shareholders
Capital maintenance	*Preserve investment of shareholders in the company
Insolvency	*shareholders liable to value of shares

Figure 3. Completed example of classification based on figure 1 text: what is Capital Maintenance.

practised further. Other extension options can include asking students to write defini-tions of concepts.

4. Reflecting on the application of the approach – what can we learn about the practicalities of teaching this reading strategy?

Literature on the teaching of reading strategies highlights four key points that the reading teacher should pay close attention to. First, learners tend to choose approaches

to reading that they prefer, not what is best.[57] Secondly, learners exert more effort when they see the text as difficult,[58] eg if reading is seen as simple, students will not adopt cognitively challenging reading strategies.[59] Thirdly, students may eschew complicated strategies unless they see them as relevant or even integral to gaining subject knowledge.[60] Finally, teachers and students need to see the particular reading tasks as being about more than simply a language deficit; they must see that successful reading requires domain knowledge, strategies and motivation.[61]

A practical response to these four points when attempting to use classification in the classroom would be to preface the teaching of the approach with a summary of the type of information found in section 1 of this article, ie comparative law and translation problems together with genre comparison, use scaffolded tasks moving from simpler to more difficult texts, and avoid giving the impression that such reading training is not remedial of perceived language deficits.

5. Theoretical underpinnings in education science

As the reader will have seen from section 1, the method illustrated above is a theoretically supported (in the context of English language journal articles from common law legal systems) means of dealing with the difficulties of understanding complex legal concepts. In the following section I provide further theoretical justification for this approach from what might broadly fall under the umbrella term *educational science*; here I look at three overlapping theories to examine the intersection (or nexus) relevant to using classification when reading.

5.a Categorisation

Classification in law as a part of legal ontology, as highlighted in section 1, is analogous to categorisation of any other kind. Categorisation within the linguistic area *lexical semantics* (loosely speaking, the meaning of words) has led to rich research on how humans think, develop understanding and remember. Categorisation in semantics can be traced to a variety of sources but the most relevant starting point is Trier in the 1930s[62] who provides a relevant conceptualisation of the relationship between words and meaning: the idea that word meaning is made up of a collection of other related words within a *semantic field* or network that becomes a conceptual domain and, in

[57]Paul A Kirschner and Jeroen JG van Merriënboer, "Do Learners Really Know Best? Urban Legends in Education" (2013) 48 Educational Psychologist 169.

[58]Patricia A. Alexander, Emily Grossnickle Peterson, Denis Dumas, Courtney Hattan "A retrospective and prospective examination of cognitive strategies and academic development: Where have we come in twenty-five years?" In Angela O'Donnell, Nicole Barnes, John Reeve (Eds.), Handbook of Educational Psychology. (Oxford University Press 2018).

[59]Michele L Simpson and Leslie Rush, "College Students' Beliefs, Strategy Employment, Transfer, and Academic Performance: An Examination across Three Academic Disciplines" (2003) 33 Journal of College Reading and Learning 146.

[60]Allison (n 36).

[61]Elizabeth Bernhardt, "Progress and Procrastination in Second Language Reading" (2005) 25 Annual Review of Applied Linguistics 133 – she talks about the "compensatory model" of second-language reading.

[62]Jost Trier "Der Deutsche Wortschatz Im Sinnbezirk Des Verstandes; Die Geschichte Eines Sprachlichen Feldes. (C. Winter 1931).

addition, that network and domain can change in time and vary across cultures.[63] This idea of a network was turned later into something labelled a *hierarchical network model*, theorised by Collins and Quillian[64] and subsequently modified and developed by Collins and Loftus,[65] and Smith and others[66] in respect of how vocabulary is processed and stored in the brain (semantic processing and semantic memory). This is a large area of study but the purpose here is to touch on the connection between legal classification as an element of legal study and classification as a model of cognition, often falling within the field of cognitive linguistics, in order to link the classification approach to reading in law and the practical value of categorising – in this way it will hopefully also be clear as to what Lea and Street mean by the overlap between skills and literacy, ie linking attention to language with meaning making in context such as "helping students understand what *counts* as law".[67]

The overlap of the work of Trier and Collins and others is what we can call the *content domain* from semantic field theory. For example, this contains the idea that concepts or areas of thought are made up of labels of contrastive and affinitive relations,[68] forming categories. Within the categories there are foci (focal points) that are more easily attended to and remembered and this forms the basis for the idea of a prototype (see in particular, Rosch[69]) – where the prominent features of members of a group align.[70] A prototype is effectively the best word meaning match in someone's mind (perhaps the most well-known example being the contrast in the *field* of birds between a penguin, not very "birdy", and a sparrow). Some research suggests it is most likely to be items at the basic level (and that are most typical) that are retrieved most effectively; for example a chair is brought forward in the mind more readily than the word "furniture" when thinking in the domain of household objects and a carrot before a pumpkin if thinking about vegetables.[71] Features that connect items in categories or networks are called nodes,[72] eg feathers and wings being nodes linked to eagles and birds.

Prototypes, in particular the concept associated with Rosch's meaning on the *degree of belonging* to a category, can be exploited as a disciplinary learning tool by applying the concept to legal ontology. This can be done by considering how an expert, eg the author of an article, thinks in terms of what is technically/correctly allowed to belong within a category, what the essential properties and nodes are, and what other properties and associated concepts he or she provides. In psychology and cognitive linguistics, a prototype is not about disciplinary expertise, ie the knowledge that a property must be present or what is objectively correct – it is not a theory of "objectively existing properties of objects

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[63]Brigitte Nerlich and David D Clarke, "Semantic Fields and Frames: Historical Explorations of the Interface between Language, Action, and Cognition" (2000) 32 Journal of Pragmatics 125.

[64]Allan M Collins and M Ross Quillian, "Retrieval Time from Semantic Memory" (1969) 8 Journal of Verbal Learning and Verbal Behavior 240.

[65]Allan M Collins and Elizabeth F Loftus, "A Spreading-Activation Theory of Semantic Processing" (1975) 82 Psychological Review 407.

[66]Edward E Smith, Edward J Shoben and Lance J Rips, "Structure and Process in Semantic Memory: A Featural Model for Semantic Decisions" (1974) 81 Psychological Review 214.

[67]Mary R Lea and Brian V Street, "The 'Academic Literacies' Model: Theory and Applications" (2006) 45 Theory Into Practice 368, 369.

[68]Eva Feder Kittay, *Metaphor: Its Cognitive Force and Linguistic Structure* (Oxford University Press 1990).

[69]Eleanor Rosch, "Cognitive Representations of Semantic Categories" (1975) 104 Journal of Experimental Psychology: General 192.

[70]Kittay (n 66).

[71]Christopher M O'Connor, George S Cree and Ken McRae, "Conceptual Hierarchies in a Flat Attractor Network: Dynamics of Learning and Computations" (2009) 33 Cognitive Science 665.

[72]ibid.

completely external to human beings", (133) and it is not completely subjective, but concerns mental images or perceptions interacting with social experience:[73] a tomato may be a fruit to a botanist and a vegetable to a greengrocer. Cognitive prototypes in the sense that I am using the term here help explain how one's mind makes sense of language, context and experience. The framework of categorisation and prototypes as a legal education tool can be exploited to foster the building of knowledge by promoting students to adjust prototypes in their own minds with those of the expert – to take the simple example given above, to do the equivalent of pointing the average person studying botany to an understanding of why a tomato is not a vegetable within their new context.

An illustration of the practical impact of semantic fields, categorisation, prototypes, and the associated theories applied to law reading relates to the nodes expected for legal concepts, which I have called *properties* in my teaching materials, and how the concepts are categorised hierarchically. If we take a specific example of *contract* in England and Scotland, there are common features; a Scottish lawyer and English lawyer would see the semantic field (to use our linguistic term) perhaps similarly in hierarchical terms (though in terms of their roots there might be differences in their links to *obligations* and to *commerce*), but there would be clear differences in properties of a contract, seeing *promise, obligation, consideration, obligation* and *consent* quite differently even though they would all be present (for an in-depth analysis of the difference, see McBryde[74]). For a contract lawyer, *their prototype* would need to satisfy *all* features or criteria set by their legal system, while an English lawyer moving to Scotland would need to *change* their prototype to adjust to the new context. It is in this search for the "correct" prototype that a proper comparative analysis would be able to take place across legal systems. Although a lawyer is unlikely to think explicitly of the concept of a *prototype*, the point here is that lawyers must have the ability to spot what properties are required (the * used in the example materials in figure 3), and what categories are correct, incorrect, helpful, and not helpful.

The theory of categorisation, prototypes and semantic fields has become part of attempts to gain greater knowledge of language structure and cognitive and neural networks.[75] The theories have influenced how we consider perception, learning and memory, and provide a framework that I would argue justifies highlighting categories and members of categories for language and educational purposes. The theories are argued to explain cognitive efficiency[76] and, when thinking about the practical pedagogical implications, relate closely to reading strategies such as knowledge mapping that research appears to agree promotes deep processing (and therefore more effective retention).[77]

5.b Schema theory

Theories such as those outlined in section 5.a, of how we understand and remember words in the *content* domain, also overlap with the theory of the reading process that "involves the construction of a coherent mental representation of the text in the readers' memory;

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[73]George Lakoff, "Cognitive Models and Prototype Theory" in Vyvyan Evans, Benjamin K. Bergen, and Jörg Zinken (eds), The Cognitive Linguistics Reader. (Equinox, 2007).
[74]William W McBryde, "Promises in Scots Law" (1993) 42 International & Comparative Law Quarterly 48.
[75]Nerlich and Clarke (n 61).
[76]Eleanor Rosch, "Principles of Categorization" in Eric Margolis, Eric and Stephen Laurence (eds), Concepts: core readings. (The MIT Press, 1999).
[77]O'Donnell and others (n 57); Angela M O'Donnell, Donald F Dansereau and Richard H Hall, "Knowledge Maps as Scaffolds for Cognitive Processing" (2002) 14 Educational Psychology Review 71.

this mental representation has been thought of as a "semantic network?";[78] meanwhile, pre-existing mental representations have been labelled *schemata*. The term has its origins in social psychology[79] and became linked to theories of how information was stored in long-term memory.[80] The idea is that mental models of the world – one's existing knowledge – influence how new information is processed, possibly influencing, among other things, what one selects to focus on and what one recalls of new information.[81]

The term *schemata* often accompanies terms such as background knowledge and subject knowledge, although they are often brought under a single heading of *content schema*.[82] The influence of content schema on reading has been well researched, including in L2 reading, and although the results are complicated and not conclusive, the relevance and importance of content knowledge to reading comprehension are highly compelling.[83]

The message from schema theory, and theories linked to it, is that terms that are familiar (whether objects or concepts) will be attended to and remembered better, while new terms need to be incorporated somehow with existing knowledge and language in the mind. Schema theory provides a compelling link between mental representations of concepts and effective learning, in particular, a search for something familiar (or what I will go on to refer to as something with *weight* or resonance) to provide an anchor point for new terms and concepts and possibly to reduce overall cognitive load.[84] The link between content schema and prototypes as developed in section 5.b should hopefully be apparent in a teaching context and indeed have had most impact under the educational theory or constructivism – that learning is about amending and accommodating new information to adjust existing schemata.[85]

5.c Education: LCT

The third, and final, theory that we will extract principles from to support the classification approach is legitimation code theory (LCT), a form of heuristics, ie a practical approach to aid learning, which has been labelled a critical sociology of education.[86] The theory is associated with Karl Maton, who argues that it provides a framework to

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[78]Panayiota Kendeou and others, "A Cognitive View of Reading Comprehension: Implications for Reading Difficulties" (2014) 29 Learning Disabilities Research and Practice 10, 10–11.

[79]Frederic Charles Bartlett and Frederic C Bartlett, *Remembering: A Study in Experimental and Social Psychology* (Cambridge University Press 1995).

[80]Henry George Widdowson, *Learning Purpose and Language Use* (Oxford University Press 1983); David E Rumelhart, David E Rumelhart "Schemata and the Cognitive System" in R. S. Wyer Jr., T. K. Srull (eds), Handbook of social cognition, (Lawrence Erlbaum Associates 1984).

[81]Hossein Nassaji, "Schema Theory and Knowledge-Based Processes in Second Language Reading Comprehension: A Need for Alternative Perspectives" (2002) 52 Language Learning 439.

[82]John Charles Alderson and Cambridge University Press. *Assessing Reading* (Cambridge University Press, 2000).

[83]Cindy Brantmeier, "Effects of Reader's Knowledge, Text Type, and Test Type on L1 and L2 Reading Comprehension in Spanish" (2005) 89 The Modern Language Journal 37; Anis Ashrafzadeh, Zuraidah Mohd Don and Mojtaba Meshkat, "The Effect of Familiarity with Content Knowledge on Iranian Medical Students' Performance in Reading Comprehension Texts: A Comparative Study of Medical and TEFL Students" (2015) 6 Journal of Language Teaching and Research 524.

[84]Slava Kalyuga, "Schema Acquisition and Sources of Cognitive Load" in Jan L Plass, Roxana Moreno and Roland Brünken (eds), *Cognitive Load Theory* (Cambridge University Press 2010).

[85]Heather Fry, Steve Ketteridge and Stephanie Marshall, *A Handbook for Teaching and Learning in Higher Education: Enhancing Academic Practice* (Routledge 2008) ch 2.

[86]Barrett, in Michael Grenfell and others, "Towards a Realist Sociology of Education: A Polyphonic Review Essay" (2017) 67 Educational Theory 193, 201.

improve our understanding of what knowledge is in different disciplines.[87] In LCT, knowledge is seen in both relativist and essentialist (realist) terms, which fits well with law; in law, we tend to accept that while the great legal minds that influenced modern laws made efforts to form law as if it were a science, as if the legal concepts and rules were universal truths, in practice law is a sociological construct.

LCT has been formulated in several dimensions of language and communication but the most relevant aspect of LCT as it connects to legal classification is the *semantic dimension*. The semantic dimension of LCT is interested in the complexity of terms in language and the contexts in which they appear. Complexity in the semantic dimension of LCT is labelled semantic density (SD), and the contextual element labelled semantic gravity (SG). More conceptual or theoretical terms have less gravity, while concrete, tangible terms have more gravity.[88] In many ways the gravity dimension is like categorising. For example, to a non-specialist, a word like *contract* might have a meaning of little density (they are unaware of its complexity), but more gravity (they may envisage it as a tangible piece of paper they sign). However, for the contract law teacher, a contract may have high density, incorporating a whole range of legal requirements, incorporating words we saw earlier such as promise, consideration, and so on, yet it is very conceptual and so of low gravity. Figure 4 provides an illustration for the contract law teacher.
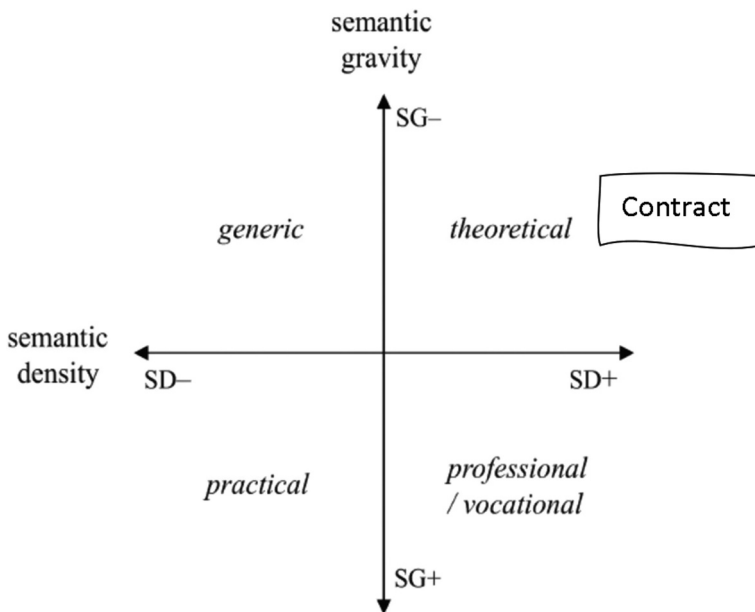

Figure 4. The semantic dimension from LCT based on Maton, adapted from Shay.[89]

[87]Karl Maton, "A Tall Order? Legitimation Code Theory for Academic Language and Learning" (2014) 8 Journal of Academic Language and Learning A34.

[88]ibid.

[89]Karl Maton, "Building Powerful Knowledge: The Significance of Semantic Waves" in Brian Barrett and Elizabeth Rata (eds), *Knowledge and the Future of the Curriculum* (Springer 2014), adapted from Suellen Shay 'Conceptualizing curriculum differentiation in higher education: A sociology of knowledge point of view.' British Journal of Sociology of Education, 34 (4), 563–82.] (2013).
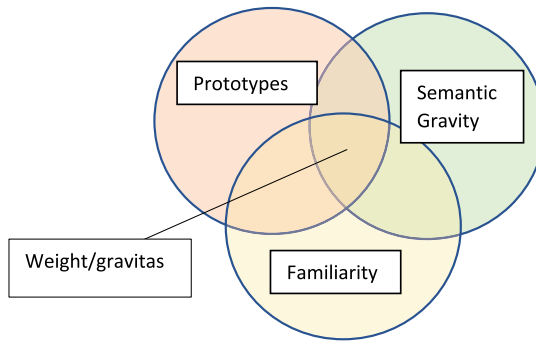
Figure 5. The nexus of the three educational theories to improve the understanding of legal concepts: categorised; contextualised; familiar.

The semantic dimension of LCT "can provide researchers and educators with valuable insights, not just into the 'how' of pedagogy, but also the 'what' and the 'why' – what new knowledge students are grappling with, why it matters, and how they need to connect it with prior knowledge to make new meanings".[90] LCT can add a useful perspective to semantic fields and schemata. As educators, we can consider terminology on the gravity dimension, asking ourselves whether the concept is grounded in students' experiences (ie activating their schema). In addition, we can ask whether the concept is, on analysis, contextually very grounded. In the corporate governance – capital maintenance example in section 3, insolvency might have the strongest gravity, appearing at the lowest point of the classification table, but in terms of student schema, companies or risk might be terms with more familiarity to present the best starting point for student comprehension and memory. Moving to explication of that concept's density, we can move to the right column of the classification table in section 3 Figure 2, unpacking elements of the concept (which we have previously thought of as properties or would be labelled nodes in a semantic network); doing this will also provide assistance as to where on the hierarchy (gravity) the term is most comprehensible or comparable to another legal system's concept.

5.d Convergence of the three theories

We can thus see a converging of the three theories underlying the classification approach to reading shown in section 3. By explicating the concept based on its context – the semantic field evident from the journal article or other text – students are then able to locate their own prototype which is familiar in the sense that it is within their existing schema, link it to something tangible, ie that has semantic gravity, and at the same time analyse its complexity and critical features; I call this a search for the concept's *weight* because of its link to gravity and because of its link to the idea of gravitas, ie seriousness and importance, both to the reader and to the requirements of the legal system. Figure 5 illustrates this convergence of the three theories. A critically important point must be emphasised: this is not simply a matter of heuristics; we are

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[90]Sherran Clarence, "Exploring the Nature of Disciplinary Teaching and Learning Using Legitimation Code Theory Semantics" (2016) 21 Teaching in Higher Education 123, 126.

explicating a concept into a semantic field that provides a valid classification within the discipline of law. Concepts such as "territory" in international law may have no great weight – they do not produce obvious legal consequences and they are vague or fuzzy – but a "state" ordered under that "superordinate" as the starting point for learning leads us to see that territory is in fact a crucial part of the definition, as might other terms in the hierarchy such as "authority".

Conclusion

This article has highlighted the problem of trying to comprehend legal concepts that either do not exist in a student's system or are system-bound, likely having different origins and different classifications, and thus are not directly translatable. It has also highlighted the point that legal academic writing in common law countries, as a genre, often displays the writer's analysis of the key legal concepts, and that classification is built into that analysis, but not in a way that a reader from a civil law system might expect.

Taking this into pedagogy, the article has summarised some of the key findings of research of teaching reading strategies and the importance of seeing the overlap between reading as a skill and legal reading literacy; as a literacy it requires engaging in appropriate thinking for the discipline and engaging with the community and culture of the writer.

The example provided of the classification reading strategy is a fairly simple one but should enable the reader to see the link between classification in law, classification as it naturally occurs in secondary legal sources in common law countries, semantic holism and reading strategies.

Literature on reading strategies highlights the particular importance of student expectations and beliefs about reading strategies being valid means of acquiring subject knowledge and the necessity of using a complex reading strategy if they believe the knowledge being gained is simple.

Finally, justification has been provided from theories in linguistics, psychology and education (all with a clear pedagogical application), as to why a classification approach to notetaking links the reader to the writer, while promoting deeper and more effective learning and memory. The approach does this by guiding students to semantic *weight* while potentially adjusting existing knowledge structures.

Disclosure statement

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