

The Limits of Visual Law

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Abstract. Not every legal rule can and should be visualized. The limits of visualization are set by the substance of the legal rule in question and the characteristics of the addressee, including the context in which he or she encounters the visual representation of the rule. Too complex a visualization – and the very purpose of visualization is lost as it does not present an improvement over the original, textual expression of the rule. Too simple (or *simplistic?*) a visualization – and the substance of the legal rule may be reduced or modified to a point that it becomes misleading and prone to misdirect action. At a basic level, the visualization of legal rules must not understate or overstate the risks of non-compliance, it must adequately inform and guide behavior. Consequently, we must not only select the best method of visualizing a given rule but also select the rules that are the best candidates for visualization.

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1. Introduction

Despite the Latin maxim *ignorantia juris non excusat* (“ignorance of the law is not an excuse”), which implies that we cannot escape liability on the basis that we were not aware of the law, statutes and court judgements have never been drafted to be easily comprehensible by the average person. Even in the consumer context, laws, regulations and contracts are rarely written with intelligibility in mind – despite the fact that legal instruments often mandate the use of plain language.¹ Somewhat illogically, we are supposed to know and follow rules that we cannot understand. Somewhat illogically, in practice, the primary addressees of legal rules seem to be lawyers and/or judges – those who enforce compliance, not those who must comply. Unfortunately, those who must comply often “discover” the applicable legal rule (or: develop a better understanding thereof) when it is too late: in the case of non-compliance. One can thus hardly disagree with the statement that “law can be made more comprehensible if it is made more visual.”² At the same time, the broad and optimistic formulation of this statement masks the inherent constraints of visualizing legal rules.

1.1 Aims

This paper presents a high-level exploration of the natural constraints encountered by Visual Law. There are limits on what can be conveyed by means of visual representations - limits dictated by the *substance* of the legal rule and the *addressee* of the visualization. Law is word-based

¹ See e.g. Regulation 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data and repealing Directive 95/46/EC (General Data Protection Regulation) (“GDPR”) Article 7 (2).

² <http://www.openlawlab.com/project-topics/illustrated-law-visualizations>

because, as a matter of principle, only words can convey the complexity of legal rules - a complexity that is increasing in parallel with (or *in response to?*) new commercial practices and social conventions. Historically, an actual familiarity with legal rules has been expected from the educated elite. It is only in the last hundred years or so that the ordinary man, including the average consumer, encounters legal rules on a daily basis *and* is supposed to understand them. The point is not that laws have not existed or that legal rules were not applicable to the average person. The point is that such person has never encountered such a multitude of complex legal rules directly affecting almost every daily activity with such frequency. Legal rules, be it in the form of traffic regulations or terms and conditions governing our access to online resources, have become pervasive. Until recently, we were not asked to read terms and conditions or express consent when consuming media content or entering buildings. Given that our activities are affected by more rules and that such rules seem to display an unprecedented intricacy, it becomes important to improve their “comprehensibility.” Making the text of a statute or regulation available online is not sufficient. Neither is providing the text of the terms and conditions governing a transaction. Against such background, the role of Visual Law cannot be overestimated. At the same time the whole area remains vague, both in terms of research agenda and goal-setting. Exploring the constraints affecting the visualization of legal rules may thus assist us in determining the best applications of visualization in terms of actual impact and in delimiting the scope of this relatively new research area.³ Determining the limits of Visual Law, even provisionally, will enable us to better describe its aims and purposes. There is little point, after all, to set ambitious goals which cannot be met.

1.2 Caveats

For present purposes, we can describe Visual Law as the use of visual representations (“VR”) of legal rules (“LR”) to better convey or communicate the substance of such rules and/or to facilitate their understanding. Notably, the acronym VR includes the legal rule in question while the term “visualization” refers to the broad concept of representing information as a chart or image (i.e. otherwise than as pure text). It must be acknowledged that, with few exceptions and as a matter of principle, it is difficult to imagine the possibility of conveying legal rules *exclusively* by means of visualizations. The assumption is that in most instances the VR will include or be accompanied by some amount of text, however minimal. Ideally, the paragraphs in this paper should be printed in intermittently overlapping vertical columns. As the relationship between the individual constraints is not fully established, presenting them in the traditional linear sequence might be misleading. Moreover, my focus on the *limits* of Visual Law must not be interpreted as a critique of this burgeoning research area. Quite the opposite. My main point is that we need to refrain from generalizations and indiscriminate enthusiasm.

³ C. R. Brunschwig, On Visual Law: Visual Legal Communication Practices and Their Scholarly Exploration (2014) *Zeichen und Zauber des Rechts: Festschrift für F. Lachmayer, E. Schweihofer et al.* (eds.), Bern: Editions Weblaw, 899-933), see also: M. E. Katsch, *Law in a Digital World* (Oxford University Press, 2010).

Arguments that are valid in one legal area, e.g. *statutes* pertaining to taxation, may be pointless in another, e.g. obligations deriving from *contractual* agreements. As demonstrated in the present and the previous issue of this journal, research should focus on the applications of visualization in specific legal areas. Visual law must be case-specific and goal-oriented, with particular emphasis on the characteristics of the addressee. The discussion in this paper could thus be accused of the very thing it seeks to criticize: making broad general statements. This approach is, however, exclusively dictated by space constraints and by the fact that *some* broad assumptions are necessary – if only to assist in delineating the optimal applications of Visual Law.

2. The Tenets of Visual Representation

We must first address the very concept of a VR. Law is text and text is visual. Arguably, every LR already *is* visually represented. When speaking of “visualization” we must therefore mean something more or something different than pure text. Presenting a page with an excerpt of a statute or a passage from a legal case constitutes a visual representation of a LR. It does not, however, necessarily facilitate its better comprehension. By “something more or different” we can mean various things, depending on the proportion between text and/or graphics. On one end of the spectrum, the VR can retain a large part of the original text expressing the LR but the text can be arranged differently for better readability. An example would be the representation of statutes or individual provisions as flowcharts or algorithms. In such instance, the text forms an indispensable part of the visualization. On the other end of the spectrum, the VR does not contain any text and assumes a purely graphic form. In such instance, the original text of the LR remains hidden and the addressee only encounters its graphical derivative. An obvious example are street signs, which are graphical representations of LRs contained in traffic regulations. As a side note: we could endlessly debate whether representations of LRs which retain all of the original legal text but only change its arrangement fall within the scope of Visual Law in the first place. We must also acknowledge that the VR constitutes a derivative of the original, legal text establishing or describing the LR. Being a derivative, the VR always diverges from the original presentation of the LR to a greater or lesser extent. The overarching research question will always concern the extent of such admissible divergence. Can the VR improve comprehensibility of legal rules if it overly reduces or simplifies their substance? To what extent does comprehensibility trump fidelity?

2.1 Repeat or reduce?

Repeating the text of the LR in the VR is often pointless, especially if the text is complex and abounds legal terms that are incomprehensible to non-lawyers. The VR must be clear and comprehensible. It must not introduce further complexity into the situation. Its aim is, to repeat the obvious, to better communicate the LR and/or to facilitate its understanding. Theoretically, the VR must as closely as possible follow or represent the LR. The fundamental assumption of Visual Law should be that the VR must not mislead the addressee as to the substance of the LR or misdirect

the addressee's behavior in a manner that could be detrimental to his or her interests. In such instance, the very purpose of visualization would be lost. There is hence an inevitable tension between providing too much information or adhering too closely to the original formulation of the LR and reducing the substance of the LR to a point where it ceases to fulfill its purpose. As the VR is always a simplified derivative of the original expression of the LR, it always carries the risk of misrepresenting the LR and hence misguiding the addressee.

2.2 Permitted complexity

If the VR is or has to be equally complex as the LR, we might have to resign ourselves to the fact that a given LR is inherently unsuitable for any other representation than its original textual expression. An example would be a VR taking the form of a decision tree or flowchart that replicates most of the legal text and, at the same time, presents a “visual spaghetti:” a confusing combination of graphical elements the relationship between which is difficult to decipher. If the LR itself is intricate, be it due to the complexity of the subject matter or due to bad drafting skills, then replicating its intricacy albeit in a different form seems inadvisable. These statements must, of course, be further clarified to avoid the impression that no VR is possible in such instance. Arguably, if the complexity of the LR prevents an adequate visualization, the VR need not fully represent the LR but “only” signal its existence and importance. In such instance, the VR would alert the addressee that legal advice is indispensable or that it is necessary to read the actual text of the LR. This is particularly the case when the LR in question can directly affect the legal and/or commercial situation of the addressee. The preceding statements leave open the question what constitutes an *adequate* visualization and whether – as implied above – the VR can be as complex as the LR itself or whether it should always simplify its substance.

3. Selecting Information

Visual Law is about better *conveying* legal information and must hence be distinguished from the mere act of *providing* information. It is, however, impossible to entirely disassociate Visual Law from the broader problems of furnishing information. The LR itself may prescribe the provision of certain information and this information may in turn contain individual LRs. Arguably, this is the case in all disclosure-based regulations. Moreover, Visual Law necessitates not only the selection of the optimal form of visualization in terms of technology (interactive website or static poster?) or manner of presentation (flowchart or algorithm?), but also the optimization (speak: *minimization*) of the amount of information to be visualized. Selecting *what* has to be visualized is antecedent to deciding *how* to visualize it. The selection process must allow for the empirically established fact that an abundance of information is generally disadvantageous and does not lead to better informed addressees or improved decision-making.⁴ In fact, a “wealth of information creates a

⁴ O. Ben-Shahar, *More Than you wanted to know: the Failure of Mandated Disclosure* (Princeton University Press, Princeton, 2014).

poverty of attention.”⁵ The problem is aggravated by the fact that most addressees operate in complex information environments, which require more cognitive effort.⁶ The VR is hence rarely the only item competing for the attention of an addressee who is not only overwhelmed by the abundance of information, legal and otherwise, but also engaged in accomplishing his or her primary task, such as online shopping or content consumption.

3.1 Challenges of disclosure

Many legal instruments, especially consumer protection and privacy legislation as well as the some of the fundamental principles of contract law, rely on disclosure, i.e. the provision of information about the consequences of an action. For example, the GDPR requires (amongst others) a relatively detailed description of the purposes of data collection,⁷ while contract law requires that the terms and conditions governing a particular transaction be made available before or at the time of contract formation.⁸ In practice, this often leads to situations where in order to comply with the law, the prescribed information is simply “dumped” on the addressee without regard to its comprehensibility or to the question whether the manner of its provision encourages the addressee to interact with it. Disclosures made online are particularly challenging given the informational density of the online environment.⁹ We often intuitively assume that online technologies can improve the delivery and presentation of information. The relatively novel concept of so-called “smart disclosures,” which concerns the use of digital technologies to furnish the right information to the right customers at the right time¹⁰ and hence facilitate reading and understanding,¹¹ may seem particularly attractive. Given that “smart disclosures” allow personalized delivery and make information more engaging, we would assume that legal information so delivered will, in fact, be more comprehensible and easier to engage with.¹² While many technologies, such as text boxes hovering over words are

⁵ H. A. Simon, ‘Designing Organizations for an Information-Rich World’ in: Martin Greenberger, *Computers, Communication, and the Public Interest*, Baltimore. (The Johns Hopkins Press, 1971) 40–41.

⁶ L. Rosenfeld, et al, *Information Architecture*, 4th Ed., (O’Reilly, Sebastopol, 2015) 15.

⁷ Regulation 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data and repealing Directive 95/46/EC (General Data Protection Regulation) Article 7; Article 21.

⁸ E. Peel, G.H. Treitel, *Treitel on the Law of Contract* (Sweet & Maxwell, 14th Ed, 2015) at para 7-007; *Hood v Anchor Line (Henderson Bros) Ltd* [1918] AC 837 (HL); *Chapleton v Barry UDC* [1940] 1 KB 532.

⁹ Directive 2009/65/EC on the Coordination of Laws, Regulations and Administrative Provisions Relating to Undertakings for Collective Investment in Transferable Securities (UCITS) [2009] OJ L 302/32, art 2(1)(m); the Australian Securities and Investments Commission, Regulatory Guide 221, ‘Facilitating digital financial services disclosure;’ see also: O. Ben-Shahar, C. E. Schneider, *The Failure of Mandated Disclosure* (2011) 159 *University Pennsylvania Law Review* 647, 684–90.

¹⁰ J. Liles, ‘Enhancing SEC Disclosure with Interactive Data’ (2014) 91 *Denver University Law Review Online* 121, 125- 127.

¹¹ A. Godwin, ‘Brave New World: Digital Disclosure of Financial Products and Services’ (2016) 11 *CMLJ* 442.

¹² E. Rubin, ‘The Internet, Consumer Protection and Practical Knowledge’ in Jane Kaufman Winn ed., *Consumer Protection in the Age of the Information Economy* (Ashgate, Farnham 2006); Ariel Porat, Lior Jacob Strahilevitz ‘Personalizing Default Rules and Disclosure with Big Data’ (2014) 112 *Michigan Law Review* 1418.

capable of highlighting or explaining specific information, they do not solve the problem of information overload, limited attention spans and alert fatigue. Similarly, making certain information unavoidable, as is the case with pop-up windows and (the incessantly annoying) online cookie notification bars, may force addressees to give it *some* attention but does not facilitate the comprehension of the LRs contained therein. Unsurprisingly, as a matter of principle and irrespective of the technology used, disclosure-based instruments have had limited success. In sum, making the VR visually appealing *and* interactive by means of online technologies need not be conducive to the comprehension of the LR. We must also remember that the aim should be to minimize the amount of information conveyed by the VR to what is absolutely indispensable to ensure comprehension.

3.2 Mechanism of Delivery

In using visualization to convey legal information we must also remember that the exact mechanism of delivery depends on the wording of the legal instrument or the formulation of the relevant LR. It may suffice to notify that information exists and make it available on demand. In other instances, specific information must be actually delivered or communicated. Information can be either *pushed* to or *pulled* by the addressee. The difference lies in the level of engagement expected from the latter. At times, the exact text must be provided, as is the case with the right to cancel a distance contract in the EU.¹³ In other instances, there is more leeway as to what wording to use and how to present it. Logically, if a legal instrument prescribes the specific text to be provided, there is less room for creative visualization techniques. In such cases, visualization may assist in improving the general layout of such text. We must also remember that even if many legal instruments prescribe that information be made easily accessible and provided in a clear and comprehensible manner, its sheer amount will always create challenges for virtually any visualization technique.

4. Thou Shalt Not Nudge!

Additional constraints concern the fact that a VR may be so effective as to directly encourage certain actions, especially if the LR presents an array of possible choices. It has been, after all, empirically established that the manner of presenting information (in terms of layout, sequence and even colors) can affect the selection made by addressees.¹⁴ Decisions can be influenced by manipulating the order of available alternatives, their attributes and the selection of defaults, amongst others. Thaler and Sunstein have famously defined a nudge as any aspect of design ‘that alters people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives.’¹⁵ Relying on findings in behavioral science and cognitive psychology, the theory behind nudges

¹³ Consumer Rights Directive 2011/83 Article 9.

¹⁴ N. Nahai, *Webs of Influence* (Pearson 2012) 72; St. Wendel, *Designing for Behavior Change* (O’Reilly, 2014).

¹⁵ R. Thaler, C. Sunstein, *Nudge: Improving Decisions About Health, Wealth And Happiness* (Yale University Press, 2008) 6.

emphasizes that individuals often make inferior decisions concerning their own welfare—decisions that would change if they had complete information, unlimited cognitive abilities and strong willpower.¹⁶ Consequently, as too many choices decrease decision-making capacity, it is often claimed that regulators are not only permitted but required to create decision environments that promote specific choices.¹⁷ Providing information to enable rational choices must, however, be distinguished from *presenting* information in a manner that encourages a specific choice.¹⁸ It remains controversial whether those who create VRs are allowed to take advantage of cognitive biases and nudge addressee towards specific actions. There might be a fine line between a visualization *enabling* better comprehension of or compliance with a LR and a visualization *promoting* a specific action, especially is such “promotion” entails a reinterpretation or distortion of the applicable legal rule. Those who create VRs, even if they act within a regulatory mandate (as would be the case with a consumer protection agency), must not present legal rules in a manner that clandestinely imposes their own values or exploit pre-existing ambiguities in the law to achieve their own aims, however well-intentioned. We must also oppose the use of visualizations to nudge addressee towards specific actions – unless, of course, the nudge pertains to objective, binary choices, such as “do not enter” or clear statutory prescriptions, such as “lodge your tax return by the end of the financial year.”

5. The Legal Rule to be Visualized

The most significant constraints for visualization concern the legal rules to be visualized. We must therefore address the challenges of correctly delineating the content and scope of the LR. To improve comprehensibility, the VR must correctly present the substance of the LR. The accompanying difficulties largely depend on the source of the LR, which determines the “raw material” from which the LR is derived, as well as the permitted degree of simplification (speak: *reductionism*) of the rule in question.

5.1 Extract and interpret

At times, Visual Law scholarship seems to assume a somewhat formalistic and straightforward character of legal rules, underestimating the challenges of their adequate representation. It is, however, important to avoid a mechanistic, “cookbook” approach to visualization and to introduce some refinements. The process of “converting” a LR into a VR can be difficult and not every LR is susceptible to visualization. We can agree that a LR is a norm mandating or guiding conduct or action in a given type of situation.¹⁹ A technically perfect LR would be, amongst others, clearly and

¹⁶ C. Sunstein, R Thaler, ‘Libertarian Paternalism is not an Oxymoron’ (2003) 70 *University of Chicago Law Review* 1159, 1167.

¹⁷ See generally: E. Selinger, K. Whyte, ‘Is there a Right Way to Nudge? The Practice and Ethics of Choice Architecture’ (2011) 5/10 *Sociology Compass* 923–935.

¹⁸ R. Baldwin, ‘From Regulation to Behavior Change: Giving Nudge the Third Degree’ (2014) 77 (6) *Modern Law Review* 831, 835 – 836; but see: P. G. Hansen, A. M. Jespersen, ‘Nudge and the Manipulation of Choice’ (2013) 1 *European Journal of Risk Regulation* 3.

¹⁹ W. Twining, D. Miers, *How to do Things with Rules*, 5th ed., (Cambridge University Press, 2010) 80.

precisely expressed so that it would leave no room for doubt about its application in any possible case.²⁰ Such perfect LR would, for example, prescribe that in circumstances X, behavior of type Y ought, or ought not to be, or may be, engaged in by persons of class Z. Clarity of expression would, logically, minimize the difficulties of interpretation and facilitate the conversion of the LR into a VR. For we must not forget that the creation of any VR always requires a conversion from one form into another and is preceded by an interpretation of the LR and, in many instances, its prior “extraction” from the relevant body of law. The complexity of this process demonstrates the level of competence expected from the person(s) attempting such conversion. As many LRs do not have a fixed, textual form, the “interpreter” of an LR must be an expert in the given field.²¹ Ideally, the entire process should be undertaken by a team of lawyers or regulators working together with designers.

5.2 From the general to the specific

Stating the LR – or simply repeating the law - does not suffice to convey its meaning or facilitate its understanding: “bare statements of legal rules are generally not self-enacting, self-interpreting, self-applying, self-invoking, self-enforcing or self-legitimizing.”²² We must differentiate between presenting laws (or a particular law) and presenting rules that derive from such law. We must also assume that to understand a LR it is not sufficient to know its formal text. A mere repetition that contracts are formed by means of offer and acceptance is not only overly simplistic but also unlikely to assist the addressee in practice. The same can be said of any VR that simply quotes or restates a statutory provision. It is only once we move from the abstract to the specific, from the provision of legal information *in general* to the communication of a LR in a particular situation or for specific purposes, that Visual Law can display its usefulness. In this context, we can tentatively suggest that while visualizations are unquestionably useful in communicating entire legal instruments their use seems more appropriate to the communication of individual legal rules, which are most relevant for a particular group of addressees. Assumedly, the narrower such group in terms of known attributes and/or the more specific the situation or legal problem at hand, the easier it is to adapt the VR to the needs of a particular scenario. In sum, visualizing the law in general is different from visualizing its individual rules in specific contexts. After all, most addressees are not interested in and need not know the law *as such*. They must only be informed of the LR that is relevant to them in a specific situation. VRs of the law in general are useful in educational contexts.

5.3 Problems with the source

We need to distinguish between the LR itself and its formulation. The latter is closely related to the source of the LR. Somewhat counterintuitively, the existence of a “confined set of words” expressing the LR can both assist

²⁰ H. L.A. Hart, *The Concept of Law*, 2nd ed., (Oxford University Press, 1994) 127-8.

²¹ Twining, Miers, above at note 19, 106.

²² W. Twining, *General Jurisprudence: Understanding Law from a Global Perspective* (Cambridge University Press, 2009) 300.

and hinder visualization. On one hand, the absence of a definite and clear formulation of a LR creates the possibility of disagreement over its scope and substance. After all, before we select the optimal manner of visualization, we must first determine the “raw material,” the words expressing the LR. Challenges in interpreting an LR may be attributable to the fact that many rules have no fixed or “official formulation,” i.e. no standard or single accepted text expressing their substance. Such is the case with most LRs deriving from the common law of contract or the common law of tort. Lawyers and scholars from civil law jurisdictions frequently underestimate the difficulty of “reducing” the *ratio decidendi* of a case (or string of cases) establishing the LR into a more concise, civil law-style formulation.²³ Many principles of contract law, to use a simple example, are not only “scattered” amongst multiple cases but also expressed in lengthy paragraphs of a descriptive nature. After all, students in common law jurisdictions are obliged to read dozens of cases to grasp the basics of contract or tort law. Consequently, conveying something as complex and abstract as, for example, the principles of contract formation or the doctrine of unilateral mistake, by means of a VR seems doomed from the outset. The solution to this conundrum – and a general guideline for the aims of visualization - is to abandon broad legal concepts and abstract principles and to consider the actual situation in which an addressee will encounter the VR. Much will depend on the purpose of the specific visualization, whether it serves to facilitate understanding or to guide actual behavior.

We can suspect that individual, context-specific applications of a LR may be easier to visualize than abstract legal concepts. For example, instead of visually representing the aforementioned doctrinally complex process of contract formation, which rests upon the core concepts of “consideration” (something given in exchange for a promise) and “intention” (as objectively evaluated from the perspective of the reasonable addressee),²⁴ it seems easier to visualize the mechanics of forming a specific contractual relationship, such as that between a telecommunications provider and its customer. In the latter instance, we need not worry about abstract legal principles but need to focus on their concrete application. It also seems easier to visualize specific rights and obligations, such as the duty to punctually pay the price or the ability to refuse the collection of personal information. It must be noted, however, that many legal doctrines such as the said doctrine of unilateral mistake in the common law of contract seems inherently unsuitable for any form of visualization – even when applied to specific circumstances. After all, how could we visually represent “knowledge of a mistake”? In sum, the absence of a clear formulation of a LR, its vague scope, reliance on broad concepts and complexity always act as natural constraints for visualization. If the LR has a fixed textual form, such as a statute or regulation, then it provides a definite and “official” text as a starting point for subsequent visualization. The mere existence of such text generally removes a lot of uncertainty concerning the substance of the LR.²⁵ In such instance, the challenges concern the meaning of specific

²³ See generally: L. Bennet Moses, ‘Recurring Dilemmas: The Law's Race To Keep Up With Technological Change’ (2007) University of Illinois Journal Law, Technology & Policy 239.

²⁴ M. Furmston, *Cheshire, Fifoot & Furmston's Law of Contract*, 16th ed., (Oxford University Press, 2012) 41.

²⁵ Twining, Miers, above at note 18, at 96.

words used to formulate the LR as well as the interrelationship between the LR and other rules. Unfortunately, as with caselaw, the substance of one LR often derives from multiple statutory provisions or can even be co-defined by other statutes. It is rarely the case that a single statutory provision translates into a LR or defines its entire scope. To complicate matters, if a LR is expressed in a fixed and *authoritative* textual form, such as a statute, interpreters are not free to change its wording. After all, a cardinal maxim of statutory interpretation is that statutes should not be paraphrased or “reformulated.”²⁶ When interpreting a statutory provision for the purposes of visualization, there is always a risk of misrepresenting the substance of the LR.

5.4 Breaking down the rules

Irrespective of their source and formulation, many LRs are complicated, filled with exceptions, qualifications, provisos and double negatives. The relationship between various parts of the rule may be unclear. One way of addressing the resulting challenges is to abandon the typical legal narrative and to break down the rule into a sequence of statements and sub-statements, each of which contains a single proposition drawn from the rule.²⁷ Such “commutation” can result in a checklist of the conditions under which the LR operates. Similarly, sections of statutes can be presented as flowcharts, maps or algorithms that visualize the steps to be taken to establish e.g. eligibility for statutory benefits or tax liability. An example is section 23 of the UK Income Tax Act 2007, which provides clear instructions for taxpayers to determine their income tax liability. Another visual device are algorithms, which usually take the form of structured questions capable of binary ‘yes’ and ‘no’ answers that confine addressees to those parts of the statute that are relevant. Algorithms, flowcharts or maps cannot, however, resolve doubts as to the scope of a LR or the interpretation of words contained therein. If the addressee does not know the meaning of ‘constitutional right’ or ‘statutory liability’ converting the LR into an algorithm or flowchart is of limited assistance. Algorithms may also prove less useful when applied to lengthy rules or to isolated sections from statutes. Statutory rules are normally part of a wider range of provisions and must be read in light of them.²⁸ The visualization of a single LR outside of its broader context creates the risk of misunderstandings. Consequently, VRs often require supplementation from more exhaustive sources. Ideally, the actual text of the LR, the relevant statute, regulation or case should be easily accessible *and* written in a clear and legible manner.

6. Addressee and Context

As indicated, laws have never been written with the aim of being easy to read and understand. Consequently, the very aim of Visual Law should be to make the LR more accessible to the average person. The optimal choice

²⁶ see Lord Neuberger in *R (on the application of M) v Slough Borough Council* [2008] UKHL 52, at 831.

²⁷ F. Bennion, *Bennion on Statutory Interpretation* 5th ed. (Lexis-Nexis Butterworth, 2008) section 139.

²⁸ Twining, Miers, above at note 19, 38.

of visualization techniques (algorithm or flowchart? amount of text to be retained? etc) depends on the addressee, the “end user” of the VR, who will encounter it in different contexts. Here, the difference between visualizations for educational purposes and visualizations aimed at providing actual advice or legal self-help becomes crucial. On one end of the spectrum, we have law students who use the VR in their studies to better understand the LR or the complex relationships between different LRs within a legal area. In such instance, the VR is not expected to directly guide the addressee’s behavior only to facilitate learning. An inadequate VR may lead to a bad grade but not to a detrimental change in the addressee’s legal position. The law student can also be expected to better understand lengthy text and legal concepts as well as to consult other resources, including textbooks or lectures. Logically, this allows the VR to remain closer to the original formulation of the LR and creates fewer, if any, constraints when it comes to replicating the text of the LR. In the law student example, the VR may improve the representation of the logical structure of the LR or an entire legal area. We can also assume a longer attention span on the side of the addressee. On the other end of the spectrum, most addressees are not law students, have moderate literacy, operate under time constraints and cannot be expected to undertake any further investigation of the LR. More importantly, they may fully rely on the VR to guide their behavior. In the latter instance, non-compliance with the LR may also lead to immediate, disastrous results. We can think of drivers encountering stop signs or tenants from disadvantaged backgrounds finding eviction notices pinned to their doors. The driver ignoring the sign will crash the car, the tenant will be facing (nearly) immediate eviction. In such instances, we must also assume short attention spans and the inability to seek further guidance as to the substance of the LR. Along the spectrum we can think of architects and building codes, consumers and standard terms of sale, criminal offenders and court procedures, website users and privacy policies. We must also allow for broad motivational factors. VR may be encountered in a preventive context, where the addressee inquires about a legal issue to avert a problem, as well as in a reactive context, where the addressee has already encountered a legal problem that requires resolution. The addressee’s motivation to follow the LR in the second situation is incomparably stronger. Arguably, the closer the VR is presented to the decision, the more likely it is to steer the actions of its addressee, the higher its potential impact on actual behavior.

7. Conclusion

While the field of Visual Law holds the promise of better conveying legal rules, we must remain aware of the practical constraints that will define the strength of this promise. The points made in this paper are simple. Not every LR is a candidate for visualization. The limits of visualization are set by the substance of the LR and the characteristics of the addressee, including the context in which he or she encounters the VR. Too complex a visualization – and the purpose of visualization is lost as the VR does not present an improvement over the original, textual expression of the LR. Too simple (or *simplistic*?) a visualization – and the substance of the LR may be reduced or modified to a point that it may mislead the addressee. At a basic level, the VR must not understate or overstate the risks of non-compliance with the LR. Consequently, we must not only select the best

method of visualizing a given rule but also select the rules that are the best candidates for visualization. Many legal rules or concepts are inherently and intentionally vague. Visualizing them may inadvertently misrepresent their clarity and scope. When a LR is particularly complex and when the risks of non-compliance are particularly grave, it is advisable to use visualization to create impactful alerts concerning the existence of the rule – and direct the addressee to seek legal advice. The main research question might concern the extent, if any, to which a VR can diverge from the LR in form and substance to remain useful in achieving the goals of Visual Law. On a more practical level, this would imply the necessity to empirically test individual visualizations in terms of their effectiveness, the latter being defined as the degree to which a given VR facilitates actual comprehension and/or the ability to guide the actions of the addressee. Of course, as indicated above, it is difficult to generalize as different forms of VR may prove to be more effective in different context.

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