Lessons From a Traffic Light
* A Juridical Scherzo

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Abstract

Traffic lights are examined as one of the most common examples of “global administrative law” governed by an international convention (the 1968 Vienna convention on traffic signs). They also bear implications for legal philosophy especially as regards the relations of individuals with norms and normativity and the creation of social norms. Furthermore the traffic light metaphor is widely used in common language and in other fields of law. Finally traffic lights are seen from a comparative law perspective, especially as a test for the effectiveness of uniform (and global) laws, taking into account essential aspects of the law such as sanctions and enforcement. Traffic lights could be used as an elementary model to verify uniformity and compliance in much more complex pieces of the law.

Keywords

traffic lights – global administrative law – philosophy of law – comparative law – uniform law – administrative sanctions

1 Introduction

Coloured sentinels of civilisation, traffic lights have regulated the circulation of vehicles and pedestrians in urban centres for over a century.

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Quite rightly, their regulation attracts very limited attention from academic lawyers. Although they play an important role in establishing fault in traffic accidents and give rise to occasional petty controversies over administrative sanctions, mention is generally given only to their role as one of the most common forms of “silent (non-verbal) law”.

Clearly an ‘entomologist lawyer’ can see much more in a traffic light, just as he or she can apply his or her all-encompassing knowledge to other material objects of everyday life: potholes, matches, rubbish, or umbrellas.

Nor should one despise such detailed analysis, which is absolutely invaluable for industries that operate in a certain sector and need to conform (unknown to the general public) to regulations or, most commonly, to technical standards.

I hope it will not appear derogatory to point out that traffic lights could offer us an even richer insight into the law than the cantaloupe melons that open Henry Hart’s legal process handbook.

I will attempt to present this topic from three perspectives:

1. Traffic lights as an example of “global administrative law”
2. Traffic lights as a philosophy of law problem
3. A comparative lawyer’s view of traffic lights

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1 See, from an anthropological perspective, R. Sacco, ‘Mute Law’, American Journal of Comparative Law 43 (1995) 455 (referred to non-explicit informal norms). One finds references to ‘silent law’ already in J. Voet’s early 18th century Commentarius ad Pandectas (Ch. 38, § 17, 5 devoted to intestate successions). In this article the perspective will be more towards a semiotic approach, clearly presented in R. Kevelson, The Law as a System of Signs (New York: Plenum Press, 1988).


3 F.K. Beutel, ‘Some Implications of Experimental Jurisprudence’, Harvard Law Review 48 (1934) 169 at 182: “One traffic light on a dangerous corner can do more to reconcile the conflicting interests involved than books full of tort decisions”.

2 Traffic Lights as an Example of “Global Administrative Law”

2.1 The Vienna Conventions
If an experienced lawyer who has been driving for a long time believes he or she is quite familiar with traffic regulations, it will probably come as a surprise to discover that all the notions he/she should know and apply are set out in a very lengthy provision of an international convention, the Vienna Convention on Road Signs and Signals (VCRSS), adopted in 1968 under the auspices of the United Nations.⁵

Although, its text is rather long, it is useful, for the purpose of this article, to reproduce Article 23 *per extenso*:

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“TRAFFIC LIGHT SIGNALS
ARTICLE 23
Signals for vehicular traffic

1. Subject to the provisions of paragraph 12 of this Article, the only lights which may be used as light signals for regulating vehicle traffic, other than those intended solely for public transport vehicles, are the following, which shall have the meanings here assigned to them:
   (a) Non-flashing lights:
       (i) A green light shall mean that traffic may proceed; however, a green light for controlling traffic at an intersection shall not authorize drivers to proceed if traffic is so congested in the direction in which they are about to proceed that if they entered the intersection they would probably not have cleared it by the next change of phase;
       (ii) A red light shall mean that traffic may not proceed; vehicles shall not pass the stop line or, if there is no stop line, shall not pass beyond the level of the signal or, if the signal is placed in the middle or on the opposite side of an intersection, shall not enter the intersection or move on to a pedestrian crossing at the intersection;
       (iii) An amber light, which shall appear alone or at the same time as the red light; when appearing alone it shall mean that no vehicle may pass the stop line or beyond the level of the signal unless
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⁵ On the same day as the VCRSS, another international convention, the Vienna Convention on Road Traffic (VCRT), was signed, which in most official publications accompanies the first.
it is so close to the stop line or signal when the light appears that it cannot safely be stopped before passing the stop line or beyond the level of the signal. Where the signal is placed in the middle or on the opposite side of an intersection the appearance of the amber light shall mean that no vehicle may enter the intersection or move on to a pedestrian crossing at the intersection unless it is so close to the crossing or the intersection when the light appears that it cannot be safely stopped before entering the intersection or moving on to the pedestrian crossing. When shown at the same time as the red light, it shall mean that the signal is about to change, but shall not affect the prohibition of passing indicated by the red light;

(b)   Flashing lights:
     (i) A red flashing light, or two red lights flashing alternately, one light appearing when the other is extinguished, and mounted on the same support, at the same height, and facing the same direction shall mean that vehicles shall not pass the stop line or, if there is no stop line, shall not pass beyond the level of the signal; these lights may be used only at level-crossings, at approaches to swing bridges or ferry-boat landing stages, and to indicate that traffic may not proceed because of fire-fighting vehicles entering the road or of the approach of an aircraft which will cross the road at a lower altitude;
     (ii) A single amber flashing light or two amber lights flashing alternately shall mean that drivers may proceed but shall do so with particular care.

2. The signals of the three-colour system shall consist of three non-flashing lights, which shall be red, amber and green respectively; the green light shall appear only when the red and amber lights are extinguished.

3. The signals of the two-colour system shall consist of a non-flashing red light and a non-flashing green light. The red light and the green light shall not appear at the same time. Signals of the two-colour system shall be used only in temporary installation, subject to the period allowed under Article 3, paragraph 3, of this Convention for the replacement of existing installations.

3. bis
   (a) The provisions of Article 6, paragraphs 1, 2 and 3, of the Convention which relate to road signs shall apply to traffic light signals other than those used at level-crossings.
   (b) Traffic light signals at intersections shall be placed before the intersection or in the middle of and above it; they may be repeated at the far side of the intersection and/or at the drivers’ eye level.
In addition, it is recommended that domestic legislation should provide that traffic light signals:

(i) Shall be so placed as not to impede vehicles moving in traffic on the carriageway and, in the case of signals set up on verges, as to impede pedestrians as little as possible;

(ii) Shall be easily visible from a distance and readily understandable as they are approached; and

(iii) Shall be standardized in the territory of each Contracting Party for the various categories of roads.

4. The lights of the three-colour and two-colour systems referred to in paragraphs 2 and 3 of this Article shall be arranged vertically or horizontally.

5. Where the lights are arranged vertically, the red light shall be placed uppermost; where the lights are arranged horizontally, the red light shall be placed on the side opposite to that appropriate to the direction of traffic.

6. In the three-colour system, the amber light shall be placed in the middle.

7. All the lights in the signals of the three-colour and two-colour systems referred to in paragraphs 2 and 3 of this Article shall be circular. The red flashing lights referred to in paragraph 1 of this Article shall likewise be circular.

8. A flashing amber light may be installed alone; such a light may also be used in place of a three-colour system at times when traffic is light.

9. In a three-colour system, the red, amber and green lights may be replaced by arrows of the same colour on a black background. When lighted up, these arrows have the same significance as the lights, but the prohibition or authorization is restricted to the direction or directions indicated by the arrow or arrows. Arrows signifying that traffic may or may not proceed straight ahead shall point upwards. Black arrows on a red, amber or green background may be used. These arrows have the same significance as the above-mentioned arrows.

10. Where a signal of a three-colour system includes one or more additional green lights showing one or more arrows, the lighting of such additional arrow or arrows shall, no matter what phase the three-colour system may be in at the time, mean that traffic may proceed in the direction or directions indicated by the arrow or arrows; it shall also mean that, when vehicles are in a lane reserved for traffic in the direction indicated by the arrow or the direction such traffic is required to take, their drivers must proceed in the direction indicated if by stopping they would obstruct the movement of vehicles behind them in the same lane, provided always that vehicles in the traffic stream they are joining must be allowed to pass.
and that pedestrians must not be endangered. These additional green lights should preferably be placed at the same level as the normal green light.

11. (a) Where green or red lights are placed above traffic lanes shown by longitudinal markings on a carriageway having more than two lanes, the red light shall mean that traffic may not proceed along the lane over which it is placed and the green light shall mean that traffic may so proceed. The red light thus placed shall be in the form of two inclined crossed bars and the green light in the form of an arrow pointing downwards.

(b) When the competent authorities judge it necessary to introduce an “intermediate” or “transition” signal for the light signals, it should be in the form of an amber or white arrow pointing diagonally downwards to the left or to the right, or two such arrows, one pointing in each direction; these arrows may be flashing. These amber or white arrows mean that the lane is about to be closed to traffic and that the road-users on that lane must move over to the lane indicated by the arrow.

12. Domestic legislation may provide for the installation at certain level-crossings of a slow-flashing lunar white light meaning that traffic may proceed.

13. In cases where traffic light signals apply to cyclists only, this restriction may be clarified, if to do so is necessary in order to avoid confusion, by including the silhouette of a cycle in the signal itself or by using a signal of small size supplemented by a rectangular plate showing a cycle."

Considering the importance of road traffic and how it has developed in the last decades, especially since Eastern Europe, Russia and China opened their frontiers, it is easy to understand that governing the circulation of vehicles on roads is one of the primary functions of any government, and the need for international uniformity is a primary goal in order to promote the safety, efficiency and expeditiousness of travel and transport.

The convention therefore sets rules in order to regulate, around the world, every instant of the day and of the night, millions of physical spaces

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6 The ancestors of the VCRSS are the 1931 Geneva Convention concerning the Unification of Road Signals, and the 1949 Geneva Protocol on Road Signs and Signals.

and the billions of people who have passed, or will pass, through them.\textsuperscript{8} We therefore (should) have stability, certainty and universality, which can rarely be found in other regulations. However this is not sufficient, because one needs also a further, human, act to implement these rules with regard to each traffic light, programming its function for long periods. The traffic engineer is empowered to control social behaviours using very precise and binding norms.\textsuperscript{9} We rarely discuss his authority and the exercise of his technical but discretionary wisdom. At the most, we curse the too-long red light or the too-short green light. Traffic, just as many other complex social processes, is regulated through technical means.\textsuperscript{10} Long before the publication of Lawrence Lessig’s vision, traffic lights were (and still are) the law.\textsuperscript{11}

Traffic lights allow us to embark on an essential discussion of the role of public regulation and administrative law.\textsuperscript{12} Quite clearly, traffic lights pursue a

\textsuperscript{8} One might assume that the world-wide importance of the convention would have prompted a rich issue of specialised literature on the subject. I have not found any commentary, apart from the official documents published in these last 50 years by the UN and its connected agencies. For a significant contribution, from many perspectives, to the various aspects of driving see R. Dewar, P. Olson, \textit{Human Factors in Traffic Safety}, 2\textsuperscript{nd} edition, (Tucson: Lawyers & Judges Pub. Co., 2007).

\textsuperscript{9} See the extremely detailed instructions for public authorities and their technical personnel when installing traffic control devices or traffic signs in the \textit{US Manual on Uniform Traffic Control Devices (MUCTD)} (see infra n 32).

\textsuperscript{10} The issue is widely discussed in legal literature: see, \textit{ex multis}, the \textit{Symposium} published in \textit{Berkeley Technology Law Journal} 26 (2011) on ‘Technology: Transforming the Regulatory Endeavor’ and in particular the contributions by H. Nissenbaum, ‘From Preemption to Circumvention: If Technology Regulates, Why Do We Need Regulation (and Vice Versa)’, at 1367 (in particular at 1376ff where she discusses the need for humans to interpret technological systems); and R. Brownsword, ‘Lost in Translation: Legality, Regulatory Margins, and Technological Management’, at 1321 (in particular at 1343ff on the ‘techno-regulatory strategies’).

\textsuperscript{11} The reference is, obviously, is to \textit{Code is Law}, available on-line in its 2.0 version at http://codev2.cc/download+remix/Lessig-Codev2.pdf [accessed on July 22, 2015].

\textsuperscript{12} And some may embark on the discussion of what kind of administrative act the traffic light is. In Germany the question seems to attract considerable attention (see H. Maurer, \textit{Allgemeines Verwaltungsrecht}, 18\textsuperscript{th} edition, (Munich: Beck, 2011) 797ff) and is qualified as a ‘Allgemeinverfügung’ (a general order). Traffic lights are considered in the general category of road signals (see G. Bitter, C. Konow, ‘Bekanntgabe und Widerspruchsfrist bei Verkehrszeichen’, \textit{NJW} (2001) 1386) and solicit clarifications by the courts (\textit{ex multis} see VG Aachen 1.2.2011, Az.2K563/09, available at https://openjur.de/u/448014.html: accessed on October 19, 2015).
public interest: in the first place avoiding traffic jams at cross-roads and intersections, and secondly, and even more importantly, preserving life, limb and property imperilled by accidents. We will use them to compare the competing private and public interest: freedom to circulate vs. public safety; reconciling one’s freedom with that of the other members of the community; paternalism vs. self-responsibility; proportionality in the exercise of administrative powers; and participation in public choices (traffic lights or roundabout?). Traffic lights are but one of the thousands of administrative decisions that govern modern societies, and certainly not one of the most important. However, we can use them to select crucial issues of debate and compare them with others, e.g. limits to pollution; urban planning; educational and health services. Starting from simple cases one can analyse complex ones.

When all these factors are laid out in an international convention, different views necessarily emerge in the debate and need to be reconciled, taking into account all those national differences – in the intensity of traffic, in the types of vehicles, in styles of driving – which will be analysed further on. Especially when there is a call for updating the VCRSS one can understand the direction of competing instances and the (administrative) means through which attempts are made to accommodate them.


14 Taking into account the fact that the Vienna Conventions are a product of a UN agency, it is useful to consider the numerous UN General Assembly resolutions and to connect them to the VCRSS and to the Global Administrative Law perspective. E.g. the latest resolution (10.4.2014) (available at http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/68/269&referer=http://www.un.org/en/ga/68/resolutions.shtml&Lang=E accessed on July 31, 2015) states, inter alia, that:

*Noting* that road traffic injuries are a major public health and development problem that has a broad range of social and economic consequences which, if unaddressed, may affect the sustainable development of countries and hinder progress towards the Millennium Development Goals,

*Expressing its concern* that the number of road traffic deaths still remains unacceptably high, with an estimated 1.24 million lives lost in 2010, and that only 7 per cent of the world’s population is covered by adequate laws that address all behavioural risk factors, including the non-use of helmets, safety belts and child restraints, driving under the influence of alcohol and drugs, inappropriate and excessive speed and the inappropriate use of cellular telephones, including texting, while driving. (...
2.2 *The Cost of (Avoiding) Accidents*

Closely related to administrative decisions is a law and economics analysis of traffic lights. There is clearly a cost, not only to set them up, but also for their continuous maintenance. The decision taken must be periodically reviewed; their functionality tested. What are the benefits?\(^{15}\) Does it actually improve regularity of circulation and prevent accidents? Are there more cost-efficient solutions?\(^{16}\) What is the point of equilibrium between cost and risk avoidance? Can one imagine an alternative system of private incentives shifting the cost from the community to the individual? For example, one might consider the fine for driving through a red light (as with most traffic fines) as a price that one can decide to pay if one does not wish to abide by the law (because one is in a hurry, because one cannot bear spending all that time waiting, one crossroads after another, to wait for the green light, etc.). Or study the economic sustainability of a toll fast-track route where traffic lights do not exist or are significantly reduced (this is the idea behind most toll-motorways).

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1. Recognizes the importance of the efficient movement of people and goods and access to environmentally sound, safe and affordable transportation as a means to improve social equity, health, the resilience of cities, urban-rural linkages and the productivity of rural areas, and in this regard takes into account road safety as part of the effort to achieve sustainable development; (...)

4. Also invites Member States that have not yet done so to address road safety holistically, starting with the implementation or continuation of a road safety management system, including, as appropriate, interdepartmental cooperation, the development of national road safety plans in line with the Global Plan for the Decade of Action, improvement of the quality of road safety statistics and data disaggregated by sex and age, collected through the standardization of definitions and reporting practices, and investments in multisectoral road traffic crash surveillance and analysis; (...)

11. Reaffirms the importance of addressing global road safety issues through international cooperation and by strengthening collaboration between Member States and civil society to build capacity and raise awareness in the field of road safety and to continue to raise awareness through the World Day of Remembrance for Road Traffic Victims on the third Sunday of November every year (...).”

15 "Institutions other than markets exist and play important roles in allocating resources. Perhaps the absence of a market reflects the availability of some other institutional structure that, in the light of all the frictions and costs of coordination and information gathering, does a good job. Consider the humble traffic light. It does a remarkable job of coordinating motorists' actions at busy intersections": R. Cornes, T. Sandler, *The Theory of Externalities, Public Goods, and Club Goods*, (Cambridge: CUP, 1996) 66.

These questions may appear futile with regard to the single traffic light, but may make sense with regard to a general policy decision in which hundreds or thousands of traffic lights must be put into place or replaced.17

3 Traffic Lights as a Philosophy of Law Problem

There are several fundamental philosophy-of-the-law aspects which are epitomised by traffic lights and which are quite commonly analysed by scholars.

3.1 Analytical logic

In the first place, the relationship between the rules expressed by the various lights calls for an analytical examination of the interaction between the duty of A to stop at the red light with the right of B to proceed with the green light and all the multiple variants, when the traffic light regulates complex crossroads with left turns and right turns, and so on. The traffic light is simply a microcosm of elementary rules which can be broken down into univocal commands, with one, and only one, meaning which is co-ordinated with the command that, at the same moment and place, is given to other members of the community and is meant to regulate an infinite number of multiple relations. The principle of non-contradiction can, and must, express itself to perfection. To illustrate the problem a few examples will suffice: what should drivers do if both lights are green? Simply and carelessly drive on in the assumption that, ultimately, the responsibility for an accident may be borne by the public authority liable for the proper functioning and maintenance of the traffic light?18 Even more puzzling is the case in which both lights are red: should both drivers wait in their vehicle until a policeman allows them to pass? What should a driver do when faced with contradictory signals: the typical example is when a driver, having driven through a green light, lawfully turns right and finds him - or herself - confronted with a red light. Is this


18 Relying on the opinion of Sir Greene MR in Joseph Eva Ltd v. Reeves, [1938] 2 KB 393 [CA]: “I cannot read those regulations as imposing upon a driver who acts in obedience to traffic lights any special duty of care towards a person who is unlawfully driving across his path”. And obviously a reasonable driver assumes that if the light is green for him/her, it is red for drivers coming from his/her right or left. For a German case of so-called ‘Feindliches Grün’ (the ‘enemy green’) see BGH, 18.12.1986 - III ZR 242/85, in NJW 1987, 1945.
command directed only towards those for whom the light is still red, or should the driver wait until it turns green (and in the meantime all the cars wanting to turn right are blocked)? Generally there is a rule that indicates how to behave in such occasions. But a red light is a red light and the golden rule \textit{prima facie} suggests one should stop, against good-sense that should urge the driver to pass.

3.2 \textbf{Signs of the Law}

As already mentioned, traffic lights are a typical form of silent law – as most traffic rules are. The images of the law surround us, from the stylised lightning outside the mains junction box, or the skull on the label of rat poison, or the red flag on the beach with a stormy sea. Traffic lights, however, present a special feature: they are dynamic, passing from one colour to another, and are meant to facilitate mass social behaviour. The effectiveness of the rule can be measured day after day, place after place, quite immediately and through simple and factual observations. Obviously it would be naive to suggest that traffic lights possess, \textit{per se}, some philosophical quality. They are, simply, a very good example of how one can find in a common object a starting point or an illustration for much more complex questions. From traffic lights one can easily move on to a general theory of the law.

3.3 \textbf{Authority}

Traffic lights raise, quite appropriately, questions concerning the notion and the role of normativity – to what extent does a community feel that they (traffic lights) actually express a binding rule, in the sense that, except in extraordinary circumstances, it should be followed? Traffic lights go to the basis of the

\begin{itemize}
\item[19] See e.g. Article 18, para. 6 of the VCRT.
\item[20] And, in fact, Article 5, para. 1 of the VCRT states that “road users shall comply with the instructions conveyed by road signs, traffic light signals and road marking even if the said instructions appear to contradict other regulations”.
\item[21] See L. Claus, ‘The Empty Idea of Authority’, \textit{University of Illinois Law Review} (2009) 1301 at 1307: “A red traffic light signals not only what police will likely do if I drive through its intersection, but also what other drivers will likely do, and what they will expect me to do”.
\item[22] J. Carbonnier, \textit{Flexible droit. Pour une sociologie du droit sans rigueur}, 5th edition, LGDJ (Paris 1983) 135 remarks, on this point: “Nous citerons, dans la même ligne de pensée, la fameuse enquête américaine sur le comportement des automobilistes en face d'un feu rouge non surveillé. Cette enquête a montré que les automobilistes se répartissent en trois groupes: ceux qui s'arrêtent, ceux qui passent sans ralentir, et ceux qui passent, main en ralentissant \textit{plus ou moins}. C'est ce troisième groupe qui est le plus intéressant. En eux
relation single persons have with authority, however the latter is vested. Clearly we are not interested in what might be qualified as deviant behaviour. Are there circumstances in which ordinary and generally law-abiding people simply do not respect traffic lights (e.g. in full daylight, when clearly nobody is coming from the “green light” direction)?

### 3.4 Flexible Interpretations of the Rule

Following this line, one cannot avoid examining the theoretical issues connected with the interpretation of the norm. Although Article 23 of the VCRSS may appear quite straightforward, one can imagine that it is subject to different interpretations by the billions of people that are faced each day with a traffic light. Does it forbid right turns (if traffic is on the right) or left turns (if traffic is on the left)? Is the amber light which turns on after the green one a warning to slow down and ultimately stop with the red light? Or is it warning drivers to speed up? The latter interpretation is far from groundless, if one considers that an orange light for pedestrians is often an indication to hurry up. Obviously we are not here to elucubrate over such occurrences. The point is that every rule, inasmuch it is addressed to a person (whether natural or legal), needs to be interpreted, and whatever the attempt to render the rule unambiguous, different interpretations will statistically increase with the

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24 Here we are faced with a problem within the problem: what colour is amber? Generally at traffic lights the colour is orange, like the fruit. But in plain language one generally speaks of “yellow” light.

25 For a hierarchy of signs and signals see Article 5 para. 2 of the VCRT: “Instructions conveyed by traffic light signals shall take precedence over those conveyed by road signs regulating priority”. But according to Article 6, para. 4 of the VCRT “The instructions given by authorized officials directing traffic shall take precedence over those conveyed by road signs, traffic lights and road markings, and over traffic regulations”. What happens if both the red and the green light are on? See S. Wexler, J. Effron, ‘Burden of Proof and Cause of Action’, McGill Law Journal 29 (1983) 468 at .468.
number of people or entities supposed to abide by the rule, and even more so if this multitude is dispersed in all the five continents.26

3.5 **Risk-runners v. Risk-avoiders**

A further, connected, aspect is the growing debate on the inter-relations between neuro-sciences and behaviour with a legal implication. Traffic lights are installed and operate to facilitate circulation and ensure safety on the roads, and these objectives are very clear to everybody. We may ask ourselves why one should not discard used batteries in a dump; but nobody doubts the reasons for traffic lights.

But these manifest goals may induce many to establish a correlation between the respect for the rules and the values protected. If there is not even a remote danger of collision, why follow the rule? Its aim is therefore interiorised and the individual, instead of having a passive attitude, weighs risks and benefits and becomes, himself or herself, a traffic controller.27

Paradoxically, the better the rule is known, the more it is transformed into a question of individual skill in performing a certain task following its prescriptions. To what extent does a community accept such a creative attitude towards a rule, considering it only as a broad indication?28

This suggests that one should look at traffic lights not as a stand-alone commandment, but as an element of a complex interplay which involves all those who are in that moment at the cross-roads, falling between a flexible guide to careful conduct and the evaluation of the facts of the specific circumstances, according to the risk adversity of each individual.29

3.6 **Traffic Lights as a Metaphor**

Finally, for those who (unlike the author of these notes) indulge in narratives of the law and in legal discourse, traffic lights undoubtedly are a powerful

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28 The typical example is when the traffic lights fail (e.g. red light for all cars coming from all directions; or green lights for all) and a by-stander starts directing the traffic: see T.C. Shelling, *The Strategy of Conflict*, (Cambridge Ma.: Harvard University Press, 1980) 144.

29 M.S. Pardo, D. Patterson, ‘Philosophical Foundations of Law and Neuroscience’, *University of Illinois Law Review* (2010) 1211 at 1248. “Apart from that status, the traffic light is nothing more than an illuminated bulb inside a housing (notice that qua physical object, nothing establishes the lamp’s status as a traffic light).
metaphor of the law, of commands and of duties. “Green light” and “red light” are common ways of expressing certain notions well beyond the realm of the law. And in fields other than road circulation, the law widely uses such metaphors when it wishes to express, clearly and simply, “do’s” and “dont’s”. From this perspective the whole of society is governed by traffic lights, or at least many wish it could be so, following the Sermon of the Mount exhortation: “yea, yea; nay, nay”.

4 A Comparative Lawyer’s View of Traffic Lights

What can traffic lights tell us about comparative law, its methods, and its purposes?

4.1 A Truly Universal Rule?

Let us start from an obvious remark: it is difficult to imagine any rule so well known all around the world as Red=STOP, Green=GO. The fact that only 60 States have signed the Vienna Convention on Road Signs does not mean that in the other 120 countries traffic lights do not exist, or work under very

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32 It is interesting to note that neither China, nor Canada, the USA and many Latin-American States have ratified the Convention. There is, however, no doubt that in those countries traffic lights operate under similar rules. In the US the sector is governed by the “Manual on Uniform Traffic Control Devices” (MUTCD) which defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public travel. The MUTCD is published by the Federal Highway Administration (FHWA) under 23 Code of Federal Regulations (CFR), Part 655, Subpart F. If one thinks that Article 23 of the VCRSS is long, one should take a
different rules (e.g. triangular,\textsuperscript{33} flashing,\textsuperscript{34} blue lights or similar imaginary applications).\textsuperscript{35}

Not only are these rules applied all around the world, but practically everybody knows them – not only those who have had to pass an exam to obtain a driving license, but also pedestrians, cyclists, people who ride animals or use animal traction, children and elderly persons.

Wherever in the world, the rule is expressed in a practically identical way, adopting or adapting the Vienna Convention words.\textsuperscript{36} We are therefore facing one of those rare cases of universal law which 19\textsuperscript{th} and early 20\textsuperscript{th} century positivists dreamt about.\textsuperscript{37}

One does not, however, need to be a full-fledged anthropologist or sociologist to know that a cross-roads in Naples is not like a cross-roads in Reykjavik; one in Cape Town is not the same as one in Peking, and differences exist not only between countries, but within the same country. This is so, even assuming that the same conditions apply: the number and type of vehicles, kind of cross-roads, length of the lights, lack of variations (e.g. no turns; no pedestrians).\textsuperscript{38}

\begin{footnotesize}
\begin{itemize}
\item Look at the pages following Section 4D.04 of the muctd ("Meaning of Vehicular Signal Indications").
\item However, see the reservations to para.7 of Article 23, which establishes that the lights shall be circular. Noticeable exceptions are Germany and Belgium.
\item Again, see some of the reservations: for the Austrian government “the green light may also be flashing. The flashing of the green light signifies that the green phase will end immediately” (i.e. a flashing green light has a meaning similar to the amber light turning on when the green light is still on).
\item According to the vcrst, parties who are not party to the latter must (Article 4) adopt a "a coherent system" for "all road signs, traffic light signals and road markings".
\item These aspects are, from various perspectives, carefully analysed by M.R. Ferrarese, Prima lezione di diritto globale, (Bari: Laterza, 2012).
\item For a typical example see R. Demogue, L’unification internationale du droit privé, (Paris: Rousseau, 1927) 131.: "La science du droit universel comparé a pour objet de recueillir et d’ordonner les phases de ce processus, elle devient ainsi un instrument efficace d’unification progressive du droit ". But the idea had already been discarded, with his usual wittiness, by R. von Jhering: "A universal law for all nations and times stands on the same line with a universal remedy for all sick people. It is the long sought for philosopher’s stone, for which not philosophers but only the fools can afford to search" (in his Zweck im Recht, English transl. Law As a Means To an End, (Boston: Boston Book Co., 1913) 328.).
\item If one were to consider pedestrians the provisions are set out in Article 24 of the vcrss and in Articles 20 and 21 of the vcrst. Although from a practical point of view they are extremely important, especially when a pedestrian is run over while crossing
\end{itemize}
\end{footnotesize}
These differences are due to a multiplicity of factors, mostly informal, which weigh on the performance of the rule.

What interests a comparatist is, precisely, if a rule, purporting to be universal, is always considered as a rule with an equal binding force, in the sense that compliance to it is very similar whatever the geographical context.\(^{39}\) If comparing is about similarities/differences, beyond the textual evidence and the ordering function rules have in a society, at the end of the day, with the aid of statistics, one might discover that a flexible notion of the red light/green light rules is equally efficient, in the sense of facilitating circulation and avoiding accidents.\(^{40}\)

### 4.2 The Colours of the Law

The aforesaid clearly points out the various perspectives related to the interaction between a rule (the traffic light) and social behaviour. Here one can notice an interesting process by which a normative provision, written down in an international convention, in national law and in lengthy regulations, transforms itself into a social norm: when drivers approach unregulated cross-roads they behave “as if” there were traffic lights.\(^{41}\) Social convention, in this as in other fields, draws lines\(^ {42}\) that should not be crossed, on the understanding that being aware of the fact that compliance is meant not only as a form of respect for the rights of others, but also as self-protection.\(^ {43}\) Taking this line of thought and moving to semantic aspects of the law one could elaborate on the implicit normative content of certain colours, in particular, red and green.\(^ {44}\)

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\(^{39}\) Why “the same person who would never drive a car through a red traffic light may be very happy to cross the road against a red ‘don’t walk’ sign (despite both signals having the same legal status)”? See C. Dent, ‘Relationships between Laws, Norms and Practices: The Case of Road Behaviour’, Griffith Law Review 21 (2012) 708 at 712.

\(^{40}\) This is quite plausible if one applies H.L.A. Hart’s notion of “cooperation in maintaining the rules” (The Concept of the Law, (Oxford: oup, 1994) 88.).

\(^{41}\) One of the most eminent scholars in this field, E.A. Posner, points out the important cooperative model that is signalled by social behaviour [“Symbols, Signals, and Social Norms in Politics and the Law”, Journal of Legal Studies 27 (1998) 765 at 767 ff.]. However, there may be conflicting social norms: the case is presented by S. Hetcher, ‘Creating Safe Social Norms in a Dangerous World’, Southern California Law Review 73 (1999) 1 at 48 f.: comparing San Francisco and New York drivers’ attitude towards pedestrians).

\(^{42}\) In English, significantly, “red lines”.

\(^{43}\) See J. Carbonnier, Flexible droit. Pour une sociologie du droit sans rigueur, n 22, 135.

\(^{44}\) In a historical perspective see C.P. Biggam, The Semantics of Colour. A Historical Approach, (Cambridge: cUP, 2012), which analyses thoroughly the relationship between colours and
Clearly their use as indicators of danger or absence of danger precedes traffic lights, but their meaning has been greatly enhanced by the enormous increase in traffic. As one has seen in other fields, colours are increasingly used in the dialogue between formal and social norms.45

Over 30 years ago the great French jurist Jean Carbonnier opposed to the “dura lex” maxim, the very realistic “flexible droit”.46 When comparing legal models, or operating for their import/export it is constantly necessary to keep in mind that, just as traffic light ‘textual’ orders (GO, STOP, SLOW DOWN) are interpreted and enforced in different ways, in a global world of legal traffic adaptive rules appear to be better equipped to deal with the various contexts.47 If we consider that differences are an intrinsic feature of rules operating in the various jurisdictions and geographical contexts, a great deal of theoretical comparative research, painstakingly aimed at capturing subtle nuances and variations, does not appear to be particularly fruitful.48 Comparative law, generally, is not about static legal situations but about processes in which rules interact and bring about a certain result. Metaphorically, it is not about photographs but about documentaries.

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46 J. Carbonnier, Flexible droit. Pour une sociologie du droit sans rigueur, n 22.

47 J. Carbonnier (Ibid. at 23) ironises about the tendency of lawyers to fill the world with homogenous rules: “Pour le panjurisme, le droit est infiniment expansible, de même qu’il est absolument homogène: il tend à emplir tout l’univers social sans y laisser aucun vide” (italics in original).

4.3 A Future without Lights?
Uniform law (the Vienna Conventions) is in place and nobody challenges it. Yet the process is far from complete and one is constantly confronted with the issues of imitation and circulation of models. On the one side there are institutional and technological approaches which tend to perfect traffic lights in their functioning and in their ability to detect and sanction offenders. On the other side we have functionalist approaches which look at the aims of traffic lights (favouring circulation and reducing accidents) and investigate the availability of alternatives which are equally or more efficient: not only roundabouts, but also “intelligent” driving systems, which connect and guide all the cars moving towards an intersection.49

Traffic lights might even be the past in respect of expert systems for circulation. Rules, therefore, cannot always be taken for granted, and traffic lights which are only a century old might easily be surpassed and forgotten. The competition is therefore not only between rules, but between rules and non-legal ways of regulating social behaviour (whether technology or social norms).50

Clearly some of these more advanced forms of regulation may require an upstream intervention by the public authorities in the form of laws, regulations and by-laws. But the rule-making role of traffic lights will have been left behind.

One is therefore faced with an extremely dynamic situation, in which changes depend on a multiplicity of factors: the same rule exists everywhere but there are different versions of it (primitive, advanced), and in some contexts it may be disappearing, because it is no longer useful.51

4.4 Fine and Punishment
The rules expressed by traffic lights are universal, and (practically) universally known. One doubts, however, that they are equally observed around the world.52 It appears reasonable to relate such variations not only to the community

50 See R. Dewar, P. Olson, Human Factors in Traffic Safety, n 8, at 240, on formal and informal traffic rules.
51 At the end of the day one might conclude that the only universal and uniformly applied rules are the 17 rules set in 1863 by the Football Association (subject, obviously, to the despotic interpretation of the referee).
perception of the binding nature of the rule, but also to the way it is enforced, and therefore its deterrent effect. What interests a comparatist is if a rule purporting to be universal is always considered to have equally binding force, in the sense that compliance to it is very similar whatever the geographical context. In most legal systems driving through a red light is considered a serious traffic offence which entails a fine (of variable size) and penalties on one’s driving license. The first obvious question is that of how the violation is ascertained. Is there a policeman at the cross-roads (typically at rush hours) or have electronic surveillance cameras been installed? This clearly has a cost, but is it per se efficient? Is the policeman doing his job or is he distracted by other activities? Are the cameras actually working? And once the number plate of the offender has been recorded, are we sure that the fine will actually, and in a timely way, be served? What are the procedural guarantees in traffic offences? The general perception of the ability of the authorities to respond to violations and of the real risk of having to pay the consequences is extremely important if we believe that sanctions have a causal link with compliance.

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53 Failing to stop at a red traffic light is considered a serious offence by the EU Directive 2015/413 on facilitating cross-border exchange of information on road-safety-related traffic offences.


55 See for an attempt to strengthen enforcement through information on “red light cameras” by the Queensland police authorities: “A red light camera is activated when the traffic light turns red. Any vehicle that crosses the stop line and enters the intersection after the light has turned red will be photographed. After a vehicle is photographed, a second photograph is taken one second later. The second photograph is used to check whether the vehicle continued through the intersection or stopped just past the stop line.” (online at https://publications.qld.gov.au/storage/f/2014-01-T03%3A01%3A19.93Z/yourkeysoffences.pdf (accessed on June 30, 2015). Therefore, violations of a rule set by a technical instrument (a traffic light) are verified through technical means (video-cameras).


57 “Part of the population, probably because of risk loving, will not be deterred by a very low probability penalty, even if the sanction is extremely severe. They can be deterred, though, by a more certain punishment even when accompanied by a much milder penalty” (A. Bar-Ilan, The Response to Large and Small Penalties in a Natural Experiment, online at http://www.google.it/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCcQFjAA&url=http%3A%2F%2Fecon.haifa.ac.il%2F~bar-ilan%2Fredlights.doc&ei=gq6SVeGTLcHr-QHbtpToBA&usg=AFQjCNF2hjcyH_JBRkaJyk57VsP5g0g&sig2=JkSRAe15vSLhTffGN6yJbw&bvm=bv.9678405,d.cWW (accessed on June 30, 2015).
moves to a much more general level if one looks also at the way the legal system reacts if a fine, any fine, is not paid. How speedy and effective are actions offered to a public body? One could easily apply game-theories to these cases if one is convinced that somewhere along the long line that goes from the moment of the violation to the foreclosure of the sum due there is a good chance that the public enforcer will make some mistake.\textsuperscript{58} Even the clearest of rules does not exist in a vacuum, and needs to be constantly contextualised. Procedures are an inherent part of the rule and it is impossible to assess the effect of the latter without analysing the former. At the same time one should consider the proportionality of the sanctions and their effectiveness. Are drivers actually dissuaded by the nature of the sanctions? Are they too mild? Or too severe? This assessment requires a comparison with the sanctions for other traffic offences, in order to verify their overall rationality.\textsuperscript{59}

5

Some Conclusions

5.1 A Compliance Algorithm
Traffic lights are a tiny piece of our society and operate on the basis of norms and in a normative context. Generally, situations are much more complex than an apparently black letter rule, and are referred to much more complex pieces of regulation: a contract; the payment of taxes; a criminal offence; a construction permit; a retirement scheme.

The variables increase considerably and with them the difficulty in establishing if and when the rules are of equivalent effect. This is not to say that unification is impossible or useless. Awareness of the limits of the law should, however, suggest a pragmatic approach which looks at results and compares them, before and after.

Especially in international and supra-national institutions, the traffic light example should suggest caution to wannabe comparatists (and wannabe lawyers) when setting out priorities and establishing rankings on the basis of the existence (or not) of a certain normative framework. In particular, in the EU, it suggests the apparently disruptive idea that uniformity and approximation, in certain cases, may not be required at all.

Instead of focusing on formal uniformity it might be useful (and even possible), starting from traffic lights, to draw for each social context a diagram showing


\textsuperscript{59} For an economic and behavioural approach see A. Bar-Ilan n 57.
where to establish the highest point in which the curves of regulation and of compliance meet. Beyond a certain point regulation does not bring about more compliance, but, instead, an increasing number of violations for which one must put into place complex and costly enforcement procedures. This “compliance algorithm” might be used in prior assessment of the impact of proposed regulation and to decide, *ex post*, whether to keep it in place.

5.1 *Supra Crepidam!*

If traffic lights are a powerful source of metaphors, a final metaphor might be applied to them, and in general to rules which are widely present in many jurisdictions.60

Rules and regulations are like a pair of shoes that each person adapts to his specific needs, keeping them spotlessly polished or deforming them to fit his or her feet; resoling them frequently or leaving holes in them. One may and indeed should conduct thorough investigations on shoes, especially if one is a shoe-maker. But one should never forget that above the shoes there are feet, legs, and persons that use them to move about.

60 Without forgetting that traffic lights should not be a substitute for the ironical portrait that Rudolf von Jhering made of a colleague of his whose lessons on private law were entirely centred on the ... snuff-box he kept on the desk in front of him (*Scherz und Ernst*, Fifth letter, (Leipzig: Breitkopf und Hartel, 1884) 81.).