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SYMPOSIUM: HOW WILL ARTIFICIAL INTELLIGENCE AFFECT INTERNATIONAL LAW?

NEW TECHNOLOGIES AND OLD TREATIES

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Every road vehicle must have a driver able to control it while in motion. These requirements, explicit in two important conventions on road traffic, have an uncertain relationship to the automated motor vehicles that are currently under development—often colloquially called "self-driving" or "driverless." The immediate legal and policy questions are straightforward: Are these requirements consistent with automated driving and, if not, how should the inconsistency be resolved? More subtle questions go directly to international law's role in a world that artificial intelligence is helping to rapidly change: In a showdown between a promising new technology and an entrenched treaty regime, which prevails? Should international law bend to avoid breaking? If so, what kind of flexibility is appropriate with respect to both the status and the substance of treaty obligations? And what role should deliberate ambiguity play in addressing these obligations? This essay raises these questions through the concrete case of automated driving. It introduces the road traffic conventions, identifies competing interpretations of their core driver requirements, and highlights ongoing efforts at the Global Forum for Road Traffic Safety to reach a consensus.

Road Traffic Conventions

The Convention on Road Traffic signed at Geneva in 1949 was principally negotiated by powerful countries in the years after World War II and ratified by many others in the following decades.[1] It was intended to "promot[e] the development and safety of international road traffic by establishing certain uniform rules."[2] Croatia's accession in 2020 brought the number of contracting parties to ninety-nine. Amendments require affirmative acceptance by two-thirds of the parties; although some have been proposed, none have ever been adopted.

By the 1960s, concern that the 1949 Convention's amendment procedure was an obstacle to greater uniformity in this area led the Economic and Social Council (ECOSOC) to convene a conference "to prepare a new convention on road traffic to replace the 1949 Convention."[3] The result was the much more detailed Convention on Road Traffic signed at Vienna in 1968.[4] Honduras's accession in 2020 brought the number of contracting parties to eighty-one. Amendments do not require affirmative acceptance by the parties, and several have been adopted.

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[1] Convention on Road Traffic, Sept. 19, 1949, 125 UNTS 22 [hereinafter 1949 Convention].

[2] Bryant Walker Smith, *Automated Vehicles Are Probably Legal in the United States*, 1 TEX. A&M L. REV. 411 (2014), *available at* Law of the Newly Possible, newlypossible.org.

[3] Introduction to the 2006 Consolidated Version of the 1968 Convention, UN Doc. ECE/TRANS/196 at vii.

[4] Convention on Road Traffic, Nov. 8, 1968, 1042 UNTS 15705 [hereinafter 1968 Convention]. A consolidated version of the convention that includes all current amendments is not available.

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Each convention provides a foundation for domestic traffic laws, a framework for admitting foreign vehicles and drivers, and a focus on road safety. The General Assembly has "reaffirm[ed] the role and importance of" these conventions.[5] Both are administered by the Global Forum for Road Traffic Safety (often called WP.1) of the Inland Transport Commission of the UN Economic Commission for Europe. Together, they now bind 133 states: fifty-two that are party only to the 1949 Convention, thirty-four that are party only to the 1968 Convention, and forty-seven that are party to both.

Some participants in the Global Forum argue that the 1949 Convention no longer binds parties that have also ratified the 1968 Convention. They note that the 1949 Convention is old and comparatively unsophisticated,[6] that ECOSOC intended to replace it, and that the resulting 1968 Convention expressly provides that it "shall terminate and replace, in relations between the Contracting Parties," the 1949 Convention.[7]

While other participants in the Global Forum agree that a party to both conventions is bound under the 1968 Convention vis-à-vis other parties to that convention, they argue that such a party remains bound under the 1949 Convention vis-à-vis parties to only that convention.[8] They also note that the 1949 Convention is roughly the same vintage as many foundational multilateral treaties, and they highlight its continued relevance, particularly in the recognition of international driving permits. Finally, they observe that the 1949 Convention actually has more contracting parties than the 1968 Convention, that some of these parties do not intend to ratify the later convention, and that both conventions continue to attract new parties.

This debate would be trivial but for two key points: First, as this section hinted, the 1949 Convention is widely viewed as effectively unamendable. Second, as the next section discusses, the two conventions share some common—and now controversial—language.

Driver Requirements

The 1949 Convention requires that "[e]very vehicle or combination of vehicles proceeding as a unit shall have a driver" and that "[d]rivers shall at all times be able to control their vehicles or guide their animals."[9] The 1968 Convention similarly requires that "[e]very moving vehicle or combination of vehicles shall have a driver" and that "[e]very driver shall at all times be able to control his vehicle or to guide his animals."[10]

The application of these requirements to increasingly automated vehicles has been on the Global Forum's agenda since the beginning of the twenty-first century.[11] In the context of automated driving, at least three key interpretations of the driver requirements have emerged:

1) Only a human who is able to steer, brake, and accelerate their vehicle is a driver who can meet the associated requirements, and at least some forms of automated driving will lack this driver.

[5] G.A. Res. 72/271, Improving Global Road Safety, para. 6 (Apr. 18, 2018).

[6] *Cf.* Marcelo G. Kohen, *Desuetude and Obsolescence of Treaties*, *in* THE LAW OF TREATIES BEYOND THE VIENNA CONVENTION (Enzo Cannizzaro ed., 2011).

[7] 1968 Convention, *supra* note 4, art. 48.

[8] In short: If A, B, and C are party to a first treaty, then a second treaty between only A and B does not change their obligations to C under the first treaty. This is analogous to domestic contract law.

[9] 1949 Convention, *supra* note 1, art. 8.

[10] 1968 Convention, *supra* note 4, art. 8.

[11] *See, e.g.*, Report of the Working Party on Road Traffic Safety on its Thirty-Seventh Session, UN Doc. TRANS/WP.1/78 (Oct. 23, 2001).

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2) A human who is able to strategically control their vehicle (by, for example, specifying a destination or directing it to stop) is also a driver who can meet the associated requirements, and all forms of automated driving can have such a driver.[12]
3) Because the conventions do not contemplate automated driving, the driver requirements simply do not apply with respect to automated driving.

Different positions have resonated with different participants at different times. The first interpretation might be more likely to find support from a country that uses civil law, has ratified the 1968 Convention, has codified the convention's provisions in its national traffic laws, and generally seeks deeper international integration. In contrast, the other two interpretations might be more likely to find support from a country that uses common law, has ratified the 1949 Convention, has not codified the convention's provisions, and generally favors broader international cooperation. (Of course, there are exceptions.)

Ultimately, two related concerns motivate the Global Forum's search for a solution before automated vehicles are technologically ready for deployment. Some participants fear that a failure to resolve this issue could delay the deployment of automated vehicles, and some fear that the inevitable deployment of automated vehicles before an explicit resolution of this issue could undermine international law. There is a key difference between these two concerns: In one, treaties threaten technologies; in the other, technologies threaten treaties.

At the same time, many parties to the road traffic conventions have already taken domestic steps to facilitate automated driving. Parties that adhere to the first interpretation of the driver requirements reference the perceived imminence of an amendment or argue that the conventions implicitly or explicitly exempt certain limited activities. In contrast, parties that adhere to one of the other interpretations view their steps as supportive of these interpretations. Indeed, at the point that automated driving becomes prevalent, that prevalence could eventually provide a strong argument for its lawfulness.[13]

These three interpretations are thus inextricably intertwined with the potential solutions discussed in the next section. Whereas proponents of the first interpretation see an inconsistency that must be changed through amendment, proponents of the other interpretations see an ambiguity that could be clarified through less formal approaches. This explanation is too linear, however, in that solutions that are perceived as procedurally viable create interest in interpretations that make them legally appropriate.

Potential Approaches

Participants have considered a variety of potential approaches to reconciling automated driving with the road traffic conventions, from softer to harder law and from unilateral to multilateral action. This section discusses representative approaches from within this matrix:

	Unilateral Measures	**Multilateral Measures**
Softer Law	Explanatory Memorandum	Working Party Resolution
Harder Law	Renunciation / Reservation	Amendment / New Convention

[12] Other conceptions of a driver are also possible, including an automated driving system or its developer.

[13] *Cf.* Int'l Law Comm'n, Draft Conclusions on Subsequent Agreements and Subsequent Practice in Relation to the Interpretation of Treaties, UN Doc. A/73/10 (2018).

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Parties that believe automated driving to be consistent with the road traffic conventions have generally focused on substantiating this view, including through the work of the Global Forum. Some have authored explanatory memoranda for the various sessions and ensured that the official reports of these sessions are at least reflective of and consistent with their view. In combination with actions that governments have taken domestically to further automated driving, these documents are intended to help support a more flexible interpretation of the driver requirements.

On one view, these efforts culminated in the Global Forum's 2018 Resolution on the Deployment of Highly and Fully Automated Vehicles in Road Traffic.[14] This resolution "note[s] the need to provide guidance to support the safe, global deployment" of these vehicles and accordingly "[p]rovides complementary recommendations supporting the principles of" the road traffic conventions. For example, an automated driving system in such a vehicle should "[c]omply with traffic rules" and "[r]eact to unforeseen situations in a way that minimizes danger to the vehicle's users and other road users." To these parties, the Global Forum's consensus adoption of this resolution is appropriate because the foundational conventions are consistent with automated driving. This adoption in turn provides strong evidence that the corresponding interpretations are reasonable.

On another view, however, this resolution does not endorse these interpretations and is merely a first step toward formally amending the 1968 Convention. To parties seeking such an amendment, the resolution is nonetheless appropriate because its recommendations can apply alongside the current driver requirements while informing the work toward an amendment. In this way, the resolution marks the beginning rather than the end of discussions about the legal status of automated driving.

Parties that adopt this view accordingly consider a formal amendment imperative and tend to prefer language that would, under certain circumstances, explicitly exempt automated vehicles from the driver requirements of the 1968 Convention.

This approach, however, could create problems under the unamended 1949 Convention: If automated driving requires changes to driver requirements in the 1968 Convention, how can it nonetheless be consistent with substantially similar requirements in the 1949 Convention? This could put a party to both conventions in the unenviable position of arguing that, for example, an automated vehicle has a driver under one convention but not under the other.

Concerns about this divergence specifically and about fragmentation more broadly led some parties to suggest drafting a new road traffic convention for automated driving. Such a convention could convert the recommendations of the Global Forum's resolution into binding obligations. It could also sidestep the issue of whether and how to amend the earlier conventions—at least for parties that already consider automated driving to be consistent with them. But this may create some tension for parties that consider automated driving to be inconsistent with their existing treaty obligations, for a new convention could change those obligations only if all the parties to the old treaty accede to the new one. On this view, a new convention on automated driving would still require some action with respect to its predecessors.

Some parties seeking an amendment of the 1968 Convention also observed that a failure to amend could disadvantage them vis-à-vis other countries, particularly if automated driving is ready before the convention is amended. Some of these parties accordingly hinted that, if the Global Forum did not reach a timely decision, they might take other actions to protect their interests. These might include transmitting a proposed amendment to the UN Secretary General without the Global Forum's endorsement, withdrawing from the convention, seeking a post-ratification reservation absent objection, or renouncing the convention and then rejoining with a reservation. To date, however, the parties have prioritized moving forward together.

[14] Report of the Global Forum for Road Traffic Safety on its Seventy-Seventh Session, UN Doc. ECE/TRANS/WP.1/165 (Oct. 3, 2018).

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These details are important in understanding how a combination of formalism and pragmatism guides the parties in these discussions. Different states, acting in good faith, can disagree both on what this fidelity requires and on what it allows. Some parties direct their creativity toward the substantive driver requirements in the 1949 and 1968 conventions. Some parties direct their creativity toward the relationship between these two conventions. And some parties direct their creativity toward the relationship between these conventions and a potential convention on automated driving. But all are creative.[15]

Indeed, creativity is already present in the Global Forum's approach to the 1968 Convention. Notwithstanding a 2006 amendment discouraging activities other than driving,[16] the Global Forum subsequently identified circumstances in which drivers can engage in other activities.[17] And when questions arose about whether users of advanced driver assistance systems were still "able to control their vehicles," the parties to the 1968 Convention answered those questions by specifying conditions under which these systems "shall be deemed to be in conformity with" that requirement.[18] This 2016 amendment has now become a helpful model for resolving the current dilemma.

Current Approach

To find a solution satisfactory to all parties, the Global Forum recognized that the language of an amendment must somehow accord both with the view that an amendment to the 1968 Convention is necessary and with the view that an amendment to the 1949 Convention is unnecessary. Its tentative compromise would amend the 1968 Convention to state that:

> The requirement that every moving vehicle or combination of vehicles shall have a driver is deemed to be satisfied while the vehicle is using an automated driving system which complies with:
>
> (a) domestic technical regulations, and any applicable international legal instrument, concerning wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles, and
> (b) domestic legislation governing operation.
>
> The effect of this article is limited to the territory of the contracting party where the relevant domestic technical regulations and legislation governing operation apply.[19]

Significantly, this language does not take sides on the interpretative issues discussed in this essay. For some parties, it would substantively change obligations under the 1968 Convention. For other parties, it would simply confirm obligations under that convention. "In either case, a party to the 1968 Convention can conclude that automated driving is lawful under this convention, and a party to the 1949 Convention can maintain its conclusion that automated driving is lawful under this convention."[20]

[15] A party to only the 1968 Convention could argue for amendment of the 1968 Convention without regard to the 1949 Convention, but a consensus would involve others that are party to both conventions.

[16] 1968 Convention, *supra* note 4, art. 8(6). The actual wording is "shall . . . minimize" in English, "must avoid" in French, and "should avoid" in Russian.

[17] Report of the Global Forum for Road Traffic Safety on its Seventy-Fifth Session, UN Doc. ECE/TRANS/WP.1/159 (Oct. 3, 2017).

[18] 1968 Convention, *supra* note 4, art. 8(5bis).

[19] Report of the Global Forum for Road Traffic Safety on its Seventy-Fifth Session, UN Doc. ECE/TRANS/WP.1/171 (Mar. 23, 2020).

[20] Informal Group of Experts on Automated Driving (IGEAD), Amendment Proposal to the 1968 Convention on Road Traffic, UN Doc. ECE/TRANS/WP.1/2020/1 (Dec. 19, 2019).

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The deliberate ambiguity of this language ultimately advances two key goals. First, it preserves the commitment to consensus and cooperation embodied in the Global Forum. Second, it shifts the Global Forum's discussion from whether automated vehicles are categorically legal to what conditions are necessary to ensure their reasonably safe operation.

Conclusion

This essay briefly describes how contracting parties to two road traffic conventions are reconciling these conventions with automated driving. Because parties take different views of whether the driver requirements in these conventions should be confirmed, clarified, or changed, they are collectively seeking a consensus that is consistent with each of these views and, ultimately, with their shared goal of facilitating the appropriate use of automated vehicles. This, in turn, serves to "promot[e] the development and safety of international road traffic by establishing certain uniform rules."[21]

A similarly flexible model may be necessary as parties address other new road transport technologies, including service robots, delivery drones, and personal mobility devices such as e-scooters. Indeed, parties have already reached different conclusions about whether e-scooters are motor vehicles in their municipal law, and these views may have implications for both the Global Forum for Road Traffic Safety and the World Forum for Harmonization of Vehicle Regulations (WP.29).

Future efforts by these bodies may be even more instructive for automated systems generally, particularly on questions of responsibility under municipal and international law. For example, the 1949 and 1968 conventions address contracting parties (which are subjects of international law), drivers (which are not subjects of international law but, if human, are subjects of municipal law), and vehicles (which are subjects of neither international nor municipal law). The Global Forum's 2018 resolution likewise addresses governments, users of automated driving systems, and the systems themselves, and it specifically recommends that governments "work[] with civil society and industry." A future legal instrument could build on this recommendation by speaking directly to the companies developing automated vehicles.

This vision brings this essay full circle. In addition to the interpretations offered by the contracting parties in the specific context of the road traffic conventions, there may be yet another way to conceptualize drivers of automated vehicles. The companies developing and deploying automated driving systems will likely remain closely involved in the operation of these systems—supervising their performance, updating their algorithms, and maintaining their data—in a way that blends the traditional roles of designer and operator. In this sense, automated vehicles will be driven by their companies. Indeed, the companies behind other automated systems may similarly act through their systems. This new role will present a key challenge and a key opportunity for both municipal and international law.

[21] 1949 Convention, *supra* note 1.

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