

Tractatus Cryptolex-Juridicus

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A Treatise on Cryptolaw Jurisprudence

1. Law is a governance system that:

- 1.1 by its terms applies to a defined class of persons (the governed subjects) in a defined class of circumstances (the governed circumstances);
- 1.2 by its terms is sufficiently deterministic;
- 1.3 in fact is enforceable against the governed subjects in the governed circumstances; and
- 1.4 in fact is regularly enforced against the governed subjects in the governed circumstances.

2. Law consists of rules, rights, duties and canons (collectively, “laws”).

2.1 Legal rules consist of prescriptions and prohibitions.

- 2.1.1 Prescriptions are orders to take action, which give rise to legal duties.
- 2.1.2 Prohibitions are orders to refrain from taking action, which give rise to legal rights.

2.2 Legal rights are exercises of powers permitted by law.

- 2.2.1 Absolute legal rights are inalienable or universal permissions to exercise powers.
- 2.2.2 Contingent rights are alienable or individual permissions to exercise powers.
- 2.2.3 An exercise of power is permitted by law (is a right) if the law prohibits restraints on the exercise.

2.3 Legal duties are exercises of powers required by law.

- 2.3.1 Absolute legal duties are inalienable or universal requirements to exercise powers.
- 2.3.2 Contingent rights are alienable or individual requirements to exercise powers.
- 2.3.3 An exercise of power is required by law (is a duty) if the law prescribes the exercise.

2.4 Legal canons are laws about laws.

2.4.1 Legislative canons are legal canons about the creation and amendment of laws.

- 2.4.1.1 Constitutional canons are legislative canons about absolute legal rights and absolute legal duties.

2.4.2 Constructive canons are legal canons about the interpretation of laws.

2.4.3 Enforcement canons are legal canons about the enforcement of laws (policing).

2.4.4 Judicial canons are legal canons about the resolution of disputes of law.

- 2.4.4.1 Presumptions are judicial canons defining default solutions to disputes of law.

2.4.4.2 Burdens are judicial canons assigning the duty to overcome presumptions to a particular dispute party.

3. The governed subjects and governed circumstances of law are the persons and circumstances it governs or purports to govern.

4. Autonomy is independence from laws.

4.1 Autonomy arises from *de jure* or *de facto* non-enforceability (1.3) or non-enforcement (1.4) of some or all laws against governed persons or in governed circumstances.

4.2 Absolute autonomy arises from *de jure* or *de facto* non-enforceability (1.3) of all or certain laws against all or certain governed subjects or in certain governed circumstances.

4.2.1 Relative to absolutely autonomous persons and absolutely autonomous circumstances, a governance system is not law, because the law is unenforceable against them and cannot become enforceable based on changes in legal canons.

4.2.1 A governance system that is limited by absolute autonomy may remain law to the non-autonomous persons and in the non-autonomous circumstances, because the governance system remains regularly enforced against the persons and circumstances in which it is enforceable.

4.3 Contingent autonomy arises from *de jure* or *de facto* selective non-enforcement (1.4) of all or certain laws against certain governed subjects or in certain governed circumstances.

4.3.1 Relative to contingently autonomous persons and contingently autonomous circumstances, a governance system may remain law, because the governance system remains enforceable against them and may again become enforced based on changes in legal canons (especially canons of enforcement).

4.3.1 A governance system that is limited by contingent autonomy may cease being law to the non-autonomous persons and in the non-autonomous circumstances, because the governance system is not regularly enforced against the persons and circumstances in which it is enforceable.

5. Autonomous law is the governance system that applies to persons and in circumstances that are absolutely autonomous from other laws.

5.1 Autonomous law is the law-of-the-absence-of-law.

5.2 Autonomous law is defined *empirically* rather than *analytically*, *a posteriori* rather than *a priori*, *ex post facto* rather than *ex ante*.

6. Cryptolaw is a type of autonomous law governing autonomous cryptosystems and the participants in such systems (in their capacities as such).

6.1 Cryptolaw replaces rules with code, rights with powers, duties with incentives and canons with consensus.

6.2 The rules of cryptolaw consist of the deployed code of autonomous cryptosystems:

6.2.1 An exercise of power that is possible with the deployed code is presumptively legally permitted as applied to that code.

6.2.2 An exercise of power that is impossible with the deployed code is presumptively legally prohibited as applied to that code.

6.3 A system of reaching consensus embodied in the deployed code of an autonomous cryptosystem can legally overcome any presumptive permissions or presumptive prohibitions by reaching a contrary result through the consensus rules embodied in the code.

6.4 “Autonomous cryptosystem” means deployed runtime software that: (a) is accessible on an unpermissioned basis; (b) is directly or indirectly operated by an open peer-to-peer network of software clients; (c) does not depend for its operation or results of operation on the discretion of any single person or group of extrinsically associated, extrinsically coordinated or extrinsically affiliated persons; (d) is not owned or completely controlled by any single person or group of extrinsically associated, coordinated or affiliated persons; (e) is clearly linked to and verifiably compiled from readily available and freely and publicly published open-source-licensed source code; and (f) uses public-key (asymmetric) cryptography as its sole native source of identification and permissioning.

7. Meta-law is a treaty between autonomous persons and non-autonomous persons to govern the relationship between autonomous law and the law of states and nations (tradLaw).

8. The meta-law governing the relationship between cryptolaw and tradLaw consists of the following rules, rights, duties and canons, as applicable:

8.1 An exercise of user power that is possible within an autonomous cryptosystem is presumed to be legally permitted by and for:

- the creators of the autonomous cryptosystem;
- the deployers of the autonomous cryptosystem; and
- the voluntary users of the autonomous cryptosystem,

in each case, as amongst each other.

The possibility of such exercises of power is presumed to give rise to an inalienable legal right on the part of each such person to exercise such power against any or all of the other such persons and against the autonomous cryptosystem itself.

8.2 A person or group of extrinsically associated persons who individually has or collectively have all technical means necessary and sufficient to exercise discretionary control over an asset (token) existing on an autonomous cryptosystem are presumed to be the legal owners of that asset (token).

8.3 An asset (token) existing on an autonomous cryptosystem and that is not subject to the discretionary control of any person or group of extrinsically associated persons on that autonomous cryptosystem is presumed to have no legal owner.

8.4 Each autonomous cryptosystem is presumed to have the status of an independent legal person.

- 8.5 The creators, deployers and users of an autonomous cryptosystem that constitutes an independent legal person do not individually or collectively have any legal liability for the actions, operations or results of operations of that autonomous cryptosystem; rather, only the autonomous cryptosystem and any assets (tokens) that are subject to the sole control of the autonomous cryptosystem are subject to such legal liability (*in personam* legal liability as to the autonomous cryptosystem, *in rem* legal liability as to the assets).
- 8.6 A person or group of persons individually or collectively possessing technical means that are necessary to exercise control over an asset (token) or any cryptosystem shall not be deemed to have discretionary control over an asset (token) or cryptosystem unless they also individually or collectively possess technical means sufficient to exercise such control.
- 8.7 An action that is incentivized by an autonomous cryptosystem (e.g., through encoded possibility of token-deposit-slashing penalties imposed by the autonomous cryptosystem if the action is not taken) is presumed not to create, entail or imply any legal duty to take the action under law.
- 8.8 The creation, deployment and use of an autonomous cryptosystem is considered speech under law.
- 8.9 Every person has the absolute legal right to create, deploy and use autonomous cryptosystems.
- 8.10 Any person knowingly and voluntarily using any autonomous cryptosystem is presumed for all legal purposes to have read and understood the code of such autonomous cryptosystem and to have consented to, acknowledged, accepted and assumed (individually and collectively) all of the potential benefits, harms, costs and risks of using that autonomous cryptosystem.
- 8.11 All presumptions provided by Meta-law may only be overturned by evidence beyond all reasonable doubt as adjudged by a panel of 12 independent reputable experts on law and autonomous cryptosystems, with the party seeking to overturn such presumptions having the entire burden of proof.