The Logic of Law

Frank van Dun

Introduction

'Law', in the sense in which we shall use the word here, denotes an order of persons.[1] We proceed from a formal analysis of an order of persons and the means that belong to them, to an analysis of an order including natural persons and the means that naturally (or by nature) belong to such persons. From the notion of order among natural persons, i.e. natural order or natural law, we move on to the notion of order among human persons, i.e. human law.

The method we shall adopt is as follows. We begin with the construction of a formal language of law using only the resources of first order predicate logic (extended with the logic of the identity of objects). We then formulate an axiomatic general theory of law in that formal language. The central notions of 'a person' and 'a means' are defined syntactically in terms of the basic relation 'x belongs to y'. The only presuppositions of the theory are that there may be things that are means but not persons, and that if 'A belongs to B' is true, then B must be a person while A must be a person or a means. In this way, we get a formal theory that one can interpret by defining rules of correspondence that link its terms to various classes of things, events, actions or relations in what the interpreter assumes to be the real world. Obviously, there conceivably is an innumerable multitude of different, more or less plausible interpretations. We shall call such interpretations material theories of law, but we shall consider them only towards the end of this paper.

We use the 'belongs to'-relation to define a number of general notions that are common in a great variety of well-known classical theories of law — e.g. those of Hobbes, Locke or Rousseau. We can derive theorems that correspond to familiar principles of law and ideas about the structure of law as an order of human affairs. Thus, the formal apparatus provides a relevant tool for analysing and criticising particular material theories of law as a human condition. Our interest in law obviously derives mainly from our concerns about human beings and their relations. The same concerns motivate our attempt to develop a formal theory of law. However, the formal system does not and cannot fix a priori the semantics of 'person' or any other term of the language. Whether all, some or indeed any human beings are persons; whether there are non-human persons; whether beings, things or constructs such as gods, elves, animals, machines, states, communities, races or classes are persons — those are not questions that we can answer by formal analysis alone. Of course, the common

[1] **See F. van Dun, The Lawful and the Legal, *Journal des Economistes et des Etudes Humaines*, VI, 4, 1996, 555 – 579, especially section 5.1. The present paper is a formal analysis of the order of persons represented in the figure on p.575.**

understanding of the word ‘person’ is that it refers to a human being, but in some disciplines (for example theology, political, legal and social theory) many other things are personified or considered to be persons. Similarly, the common understanding of ‘natural person’ is that it too refers to a human being. Again, some disciplines or philosophies may assume that the formal characteristics of what we here call ‘a natural person’ apply to other sorts of things as well as to human beings. Our aim here is not to judge the merits or demerits of particular material theories of law from a semantic or pragmatic point of view. It is merely to elucidate their common logical forms and the effects of particular postulates to which they might appeal in arriving at particular conclusions.

Similar strictures apply to the interpretation of the other basic terms of the formal theory. Which things and relations in the real world qualify as ‘means’ and as instances of ‘x belongs to y’, is a question that falls outside the scope of that theory. The number of qualitatively and quantitatively different possible interpretations is in any case staggering. There is of course no guarantee that even that number comprises all possible material theories of law. Moreover, some material theories may postulate that there are two or more mutually irreducible modes of the relation ‘x belongs to y’—for example, ‘x naturally belongs to y’, ‘x legally belongs to y’ and ‘x morally belongs to y’. Theories that make that assumption probably will assert that a given means M may well belong to a person P in one sense of ‘to belong’ even if it does not belong to him in any other sense of that term.

Our assumption, then, is that all or nearly all of the better known and historically influential material theories of law are or include interpretations of the formal theory that we shall set out below. To the extent that assumption is true, the formal theory is a tool for drawing out the implications of such theories and interpretations.

In the first section we set out the general theory of law as a formal theory of order among persons and the means that belong to them. It is a general theory in the sense that it is very nearly a pure logic of the binary predicator ‘x belongs to y’. Indeed, the general theory has only two axioms that restrict the possible interpretations of that predicator. By introducing new predicators — all of them defined in terms of the basic ‘x belongs to y’ — we can extend the vocabulary of the formal theory and rephrase its theorems in a manner that reveals its relevance for the philosophy of law.

Next, we consider an extension of the general theory to provide a formal framework for referring to actions. We introduce a couple of predicators that refer to relations between ‘actions’ and ‘means’ or ‘persons’. Again, there are just a few axioms that restrict the possible interpretations of those predicators. We conclude the first section with the formulation of a general principle of justice.

In the second section, we introduce another basic binary predicator, ‘x naturally belongs to y’, that we define implicitly by means of a few axiomatic constraints. The main interest of that section is the formal definition of the predicator ‘is a natural person’. This gives us a formal perspective on the notion of natural law as an order among natural persons.

We then try to flesh out that perspective by introducing a number of propositions that together make up a naturalistic filter and a principle of natural justice. We may think of the former as postulates of natural law. They formally link the general theory of order among persons to the theory of order among natural persons (the theory of natural law). Applying the filter to theories about the status in law of natural persons, we can identify and eliminate those that conflict with the postulates of natural law or the principle of natural justice. We shall see that political and legal theories of law

(which accommodate the notion of unilateral rule or legislation) have to deny the principle of natural justice.

In the third section, we introduce a formal placeholder for human beings into the framework of the theory of natural law. We conclude the analysis with a brief look at the different ways in which the theory of human law can be integrated formally into the general theory.

SECTION I

The General Theory

The system $\mathbf{L_0}$. The binary predicator Bo_1o_2 denotes the basic relation of the formal system $\mathbf{L_0}$ we are about to construct. In view of the intended interpretations we read it as 'o_1 belongs to o_2'. (Occasionally we may substitute other readings, such as 'o_1 is property of o_2', 'o_2 is responsible / answerable for o_1' or some other appropriate expression. The reader should bear in mind that such variations merely serve a stylistic purpose. They do not imply any logical differences.) We also define a predicator Io_1, which we read as 'o_1 is innocent'. It will be some time before we find any use for it, but we might as well introduce it here. In addition, the standard expression for the identity of objects, $o_1=o_2$, is a primitive expression of $\mathbf{L_0}$.

The well-formed formulas (henceforth wff's) of $\mathbf{L_0}$ are defined recursively as follows. Bo_1o_2, Io_1 and $o_1=o_2$ are wff's if each of o_1 and o_2 stands either for a variable or a constant referring to an object in the domain $\mathbf{D}(\mathbf{L_0})$. If F is a wff then so is the negation of F [written as '–F', read as 'not F']. Also, if F is a wff and 'v' a variable name referring to an object in $\mathbf{D}(\mathbf{L_0})$, the universal quantification of F [written as '(v)F', read as 'for all v, F'] and the particular quantification [written as '(#v)F', read as 'for at least one v, F'] are wff's. If F and G are wff's then the conjunction of F and G [written as 'F & G', read as 'F and G'] and the adjunction of F and G [written as 'F v G', read as 'F or G'] are wff's. Also, the implication of G by F [written as 'F > G', read as 'F only if G' or 'if F then G'] and the equivalence of F and G [written as 'F == G', read as 'F if and only if G'] are wff's. Finally, We shall use round and occasionally square brackets — '(' and ')'; '[' and ']' — to group wff's and so indicate the priority of the logical operators.[2]

We say that a formula is closed if there are no free variables in it. A variable is free unless a quantifier binds it. For example, suppose that F is a closed formula of $\mathbf{L_0}$ and that 'o' is a constant name referring to a particular object in $\mathbf{D}(\mathbf{L_0})$; then the variable name 'v' is free in 'F & Bov' but not in '(v) (F & Bov)' or 'F & (#v) (Bov)'. A closed formula of $\mathbf{L_0}$ is called a proposition.

The variables o and 'o' in Boo', 'o=o' or Io range over a domain $\mathbf{D(L_0)}$ of objects. Within that domain, we distinguish between mere objects and objects of a special

[2] **To save on the use of brackets, we adopt the following conventions. 1) We leave out the outermost brackets: we write 'F' instead of '(F)'. 2) No brackets are used for elementary formulas: for example, we write 'Bo_1o_2' instead of '(Bo_1o_2)' and '-Bo_1o_2' instead of –(Bo_1o_2)'. 3) By default, the implicator '>' is the first operator to consider for parsing a formula. Thus, we should read 'A & B > C v D' as if it were written '(A & B) > (C v D)'. 4) By default, the negator '-' is the last operator to consider in parsing a formula. Thus, we should interpret '-A & B' as if it were written '(-A) & B'.**

kind. Among the latter we make a distinction between ‘means’ and ‘persons’. They are defined in terms of the relation B*oo*’:

(SD1) Po’ =: (#o) Boo’
O’ is a person =: there is at least one object O such that O belongs to O’.
(SD2) Mo’ =: (#o) Bo’o
O’ is a means =: there is at least one object O such that O’ belongs to O.

An object that belongs to no person and for which there is no means that belongs to it, is a mere object. In terms of the intended interpretation, it is outside the law.

In the following presentation, we use the variables p, q, … and the constants a, b, … to refer to persons. We use the variables x, y, … and the constants m, n, … to refer to means. Occasionally we shall use subscripts or superscripts to expand the number of symbols for variables or constants — for example p_1, q’, a_2, b”, m’. If ever we need to refer indiscriminately to objects in $\mathbf{D(L_0)}$ — whether they are means, persons or mere objects —, we shall use the variables o, o’, o”, … and the constants o_1, o_2, o_3… (as we did in SD1 and SD2).

By using distinct sets of variables to refer to the class of persons, respectively to the class of means, we can simplify considerably the presentation of the system by having recourse to the technique of many-sorted quantification. Thus (p)F and (#q)G are to be read respectively as ‘for all persons, F [is the case]’ and as ‘for at least one person, G [is the case]’. On the other hand we read (x)F and (#y)G respectively as ‘for all means, F [is the case]’ and as ‘for at least one means, G [is the case]’.

Given the syntactical definitions SD1 and SD2, we can immediately derive two theorems: (p)(#x) Bxp and (x)(#p) Bxp — for every person, there is at least one means that belongs to him; and for every means, there is at least one person to whom it belongs. The proofs of those theorems are too simple to spell out. In any case the formal presentation should make it easy to check their validity. The same remarks apply to all the other theorems. While I shall occasionally provide short sketches of proofs, I shall merely list most theorems without proving them.

The logical use of Bxp is constrained by two axioms.

($A_0$1) (p)(#q) (Bpq)
Every person belongs to at least one person.
($A_0$2) (x)(p)(q)(Bxp & Bpq > Bxq)
If person P belongs to Q, P’s property also belongs to Q.

In view of SD2 the first axiom implies that every person is a means. In other words, the set of persons is a subset of the set of means. Consequently, the name of any person is the name of a means and the variables x, y, … can be instantiated with the names of persons. The first axiom ensures that if something is identified as a person, it is meaningful to ask to whom he belongs. The answer may be for example ‘to himself alone’, ‘to himself and one or more other persons’ or ‘to one or more other persons’. The axiom only excludes the possibility that we consider something to be a person (in the sense of the formal theory) that belongs to no one—something that is the property of no one or for which no person is responsible or answerable.

The second axiom specifies that Boo’ is a transitive relation if the middle term (which is ‘p’ in the formulation of $A_0$2 above) refers to a person. It makes persons the central elements of law. Means of action ‘follow’ the persons to whom they belong.

Thus, what lawfully belongs to a corporate person also belongs to those persons to whom the corporation belongs. A slave's property also belongs to his master (assuming that there is such a thing as lawful slavery).

Persons

The notion of law that is relevant here is that of an order of persons. Our first task, therefore, is to define different sorts of persons that we can distinguish in terms of the theoretical apparatus at our disposal and to spell out the relations that obtain between persons of the same sort or of different sorts. Obviously, we do not define here different sorts of things that can be persons, but different sorts of persons, which a thing can be if it is considered to be a person by some theory of law. We begin with the concept of 'a real person'.[3]

(DP1) P_rp =: Bpp.
P is a real person =: P belongs to himself.

A person that does not belong to himself we shall call an *imaginary* person. Occasionally we shall use the predicator P_{im} to denote imaginary persons. Obviously, every person is a real or an imaginary person.

(DP2) P_fp =: Bpp & (q)(Bpq > p=q)
P is a free person =: P belongs to himself and only to himself.

A free person is 'his own man' in that nobody else has a lawful claim on his person. Occasionally we shall use the predicator P_{uf} to denote persons that are not free. A material theory of law should be able to say which of the persons it recognises are free (that is, solely responsible for themselves). Obviously,

TP1) (p) ($P_fp > P_rp$)
Free persons are real persons.
TP2) (p) ($P_{im}p > P_{uf}p$)
Imaginary persons are not free.

Note that a person that is not free may be real and therefore responsible for himself, though not, of course, solely responsible for himself. Others may share that responsibility.

We now define three general relational concepts in terms of a person's relation to others: sovereignty, autonomy and heteronomy.

---

[3] **Of course, this term and others that will be introduced shortly are just labels. They serve merely to facilitate the reading of formulas. If a reader finds any of those labels objectionable or unfortunate, he is free to substitute another that he prefers. What counts, after all, is the logic of the classification, not its verbal expression. I have taken care to chose labels that are in rough conformity with accepted usage. Nevertheless, there are some cases where no common term is available. The concept of a real person, as defined here, probably is an example. In other cases, the formal approach reveals distinctions that are not commonly made in ordinary language (and which may explain some uncertainties and controversies in theoretical discussions). For those cases, we can do little more than make up distinguishing labels as the need arises.**

(DP3) Sp =: (q)(Bpq > p=q)
P is a sovereign person =: P belongs to no person but himself.

It follows immediately that

TP3) (p) (P_fp > Sp)
Free persons are sovereign.

Given **$A_0$1**, we derive

TP4) (p)(Sp > P_fp)
Only free persons can be sovereign.
TP5) (p) (Sp == P_fp)
A person is free if and only if he is sovereign.
TP6) (p) (Sp > P_rp)
A sovereign person is a real person.

Although their definitions are different, the concepts of a free person and of a sovereign person are logically equivalent in the general theory of law. Both only apply to real persons. Next we define autonomy.

(DP4) Ap =: (q)(Bpq > Bqp)
P is an autonomous person =: if P belongs to some Q then Q belongs to P.

From **$A_0$1** and **$A_0$2**, we deduce

TP5) (p) (Ap > P_rp)
An autonomous person is a real person.
Proof: Let P be an autonomous person. From $A_0$1 it follows that P belongs to some person Q. Given that P is autonomous, it follows that any such Q belongs to P. Now, if P belongs to Q and Q to P, then according to $A_0$2 it is the case that P belongs to P. That is to say, P is a real person. Q.E.D.

TP6) (p) (Sp > Ap)
Every sovereign person is an autonomous person.

Note that it does not follow that every autonomous person is sovereign. We define the concept of heteronomy simply as the negation of autonomy.

(DP5) Hp =: -Ap
P is a heteronomous person =: P is not an autonomous person.

Because –Ap == (#q) (Bpq & -Bqp), a heteronomous person P belongs to some person Q who does not belong to P. Thus, there necessarily is another person who is responsible for a heteronomous person. Obviously,

TP7) (p)(Ap v Hp)
Every person is either an autonomous person or a heteronomous person.

We shall say that B is a *master* of A and A is a *serf* of B, if A is an heteronomous person and belongs to B who does not belong to A. Thus, we may use the term 'serf' as a synonym for 'heteronomous person'. Obviously, a serf may have more than one master, and a master may have more than one serf. Note that the definition does not imply that a master is autonomous. B, the master of A, may be a serf of C.

We shall make a distinction between the master-serf relationship and the ruler-subject relationship. If A belongs to B and B is an autonomous person, then we shall say B is a *ruler* and A is his *subject*. Clearly, a master need not be a ruler, because the concept of 'master' does not imply autonomy. On the other hand, a subject is not necessarily a serf, nor is a ruler necessarily a master. For example, A may belong to autonomous B (and therefore be a subject of B); yet A may be autonomous himself (in which case B belongs to A and A is a ruler of B). Indeed, it is logically possible for two persons to be at once rulers and subjects of one another.[4]

TP8) $(p)(P_{im}p > Hp)$
An imaginary person is heteronomous.

Proof: Suppose that A is an imaginary person. Then, A does not belong to himself. Now suppose that A is not heteronomous. Then, A must belong to some person B, who B must belong to A. By $A_0 2$, A then must belong to himself. However, this contradicts the supposition. Q.E.D. Intuitively, since an imaginary person does not belong to himself, and is therefore not answerable for himself, someone else must be responsible for him if he is to be part of the order of law. Obviously, because an heteronomous person belongs to another:

TP9) $(p)(Hp > P_{uf}p)$
Heteronomous persons are not free persons.

Because not every autonomous person is sovereign, we have use for the following definition.

(DP6) $A!p =: Ap \& -Sp$
P is a strictly autonomous person =: P is an autonomous person who is not sovereign.

Obviously,

TP10) $(p)(Ap > Sp \vee A!p)$
Every autonomous person is either sovereign or strictly autonomous.
TP11) $(p)\ (A!p > (\#q)(Bpq \& -p=q))$
A strictly autonomous person belongs to another person.
TP12) $(p)(q)(A!p \& Bpq > A!q \& Bqp)$
If P is a strictly autonomous person who belongs to Q, then Q is a strictly autonomous person who belongs to P.
TP13) $(p)\ (A!p > P_{uf}p)$
Strictly autonomous persons are not free persons.
TP14) $(p)\ (Sp \vee A!p \vee Hp)$

[4] **This possibility lies at the heart of Rousseau's notion of citizenship, which implies that each citizen should rule and at the same time should be under the rule of every other citizen of the state. We shall discuss Rousseau's conception of citizenship briefly in the text.**

Every person is sovereign, strictly autonomous or heteronomous.
TP15) –(#p) (Sp & A!p)
No person is at once sovereign and strictly autonomous.
TP16) –(#p) (A!p & Hp)
No person is at once strictly autonomous and heteronomous.
TP17) –(#p) (Sp & Hp)
No person is at once sovereign and heteronomous.

TP14-17 tell us that the set of persons is partitioned in three jointly exhaustive but mutually exclusive sets of respectively sovereign, strictly autonomous or heteronomous persons. About the number of persons (if any) in any of those sets, the formal theory has little to say. However, some quantitative results are implied:

TP18) (p) (-Sp > (#q)(Bpq & -p=q))
Every non-sovereign person belongs to at least one other person.
TP19) (p) (Ap & (q)(Aq > p=q) > Sp)
If P is the only autonomous person, then P is sovereign.
TP20) (p)((q) p=q > Sp)
If P is the only person, then P is sovereign.

Thus, if there is a non-sovereign person, then there must be at least two persons. Consequently, if there is only one person, that person must be sovereign. A sovereign person may be the only person in the world, but a strictly autonomous or a heteronomous person must have personal company.

By inductive generalisation we can derive the following propositions. (The expressions 'finite word' and 'infinite world' stand for a world with a finite, respectively a world with an infinite number of persons in it.)

MT1: *Only in an infinite world can all persons be heteronomous.*
MT2: *Only in an infinite world can there be serfs who are not subjects.*
MT3: *In a finite world there must be at least one autonomous person.*
MT4: *If there is a serf in a finite world, he must be the subject of some ruler(s).*

Thus, in a finite world, there must be at least one sovereign person or at least one community of strictly autonomous persons. Whether or not there also are heteronomous persons, the formal theory does not specify. However, if there are, then we are dealing with a world in which there are rulers and subjects (who are also serfs).

Collectives

A strictly autonomous person is always 'in community' with at least one other strictly autonomous person. If A is a strictly autonomous person and belongs to B, then B must be a strictly autonomous person and belong to A. We shall refer to A and B as '*members of the same autonomous collective*'.

(DP7) SACpq =: A!p & Bpq
P and Q are members of the same autonomous collective =: P is a strictly autonomous person and belongs to Q.

Obviously,

TP21) (p) (A!p > (#q) SACpq)
TP22) (p) ((#q) SACpq > A!p)

In short, strictly autonomous persons *are* members of some autonomous collective or other. Therefore, we may treat 'P is a strictly autonomous person' as synonymous with 'P is a member of an autonomous collective'. From $\mathbf{A_0 2}$ it follows that 'being a member of the same autonomous collective' is a reflexive, symmetrical and transitive relation for strictly autonomous persons.

TP23) (p) (A!p > SACpp)
TP24) (p)(q) (SACpq > SACqp)
TP25) (p)(q)(r) (SACpq & SACqr > SACpr)

An autonomous collective has at least two members, but it may well have many more. Also, of course, there may be any number of autonomous collectives. From the mere fact that A and B are both strictly autonomous it does not follow that they belong to the same autonomous collective (i.e. to one another).

Obviously, no person can be a member of more than one autonomous collective. If C1 and C2 are different autonomous collectives (there being at least one person who is a member of one but not of the other), then none of the members of C1 is a member of C2, and vice versa. Of particular relevance is the following theorem:

TP26) (p)(q)(x)(SACpq > (Bxp = Bxq))
Whatever belongs to one member of an autonomous collective also belongs to every other member.

Autonomous collectives are perfect communities, exhibiting a perfect communism, every member of the collective sharing the person and the means of all other members.

The members of an autonomous collective may be masters and rulers of other persons, who would then be serfs and subjects of each and every one of the members of the collective. However, while the members of an autonomous collective necessarily are rulers and subjects of each other, they cannot be serfs of any master (for then they would not be autonomous persons). Nor can they be subjects of any person who is not a member of the collective, since that too would conflict with their status as autonomous persons.

We should distinguish an autonomous collective from a *hegemonic* collective. The latter necessarily comprises a class of serfs, all of whom are subjects of the same rulers (the same masters). A sovereign master (ruler) with his serfs forms a hegemonic collective. If several sovereign persons have a number of serfs in common, they and their common serfs form a hegemonic collective. The rulers in a hegemonic collective need not be sovereign. They may form an autonomous collective among themselves. Think for example of an autonomous republic of citizens (in the manner of Rousseau) that rules over a subject population that is denied 'political rights' or membership in the community of citizens. The structure of such a hegemonic collective obviously is different from one in which the rulers are sovereign persons. In the latter case, all of

the subjects belong to the same group of rulers, but the rulers themselves do not belong to one another.

Clearly, sovereign persons have no master. Although several sovereign persons may have many means (including serfs or subjects) 'in common', they are always independent of one another. They cannot be part of an autonomous collective; and if they are part of a hegemonic collective, their position in it must be that of a ruler. Unlike strictly autonomous persons, who are necessarily rulers and subjects, sovereign persons need not be either. Thus, sovereign persons need not be members of any collective and they do not constitute a collective of any sort.

A digression on autonomous collectives

Autonomous collectives are well known in the history of the political philosophy of law and rights. For example, we may represent Hobbes' natural condition of mankind as an autonomous collective. In the natural condition, Hobbes writes, there is no distinction between 'mine' and 'thine' as every person has a right to everything, including 'one another's body'. In that sense, every person belongs to every other. Consequently, there is no distinction between justice and injustice.[5] Hobbes' argument was that the natural condition was an impractical, indeed life threatening state of affairs. For him it was a dictate of reason that men should abandon the condition of the autonomous collective and should reorganise in one or more separate hegemonic collectives. Each of those would be defined by the relationship between a free person (ruler-master) and a multitude of subjects (who are also serfs). For Hobbes, then, the sacrifice of the 'equality' of the original autonomous collective was a necessary condition for survival, peace and comfort. Perhaps the most significant aspect of Hobbes' theory was that it suggested an double reading for the constitutive relation of the 'commonwealth', B(subject, sovereign). Next to the reading 'subject belongs to sovereign', which represents the political or power relation, Hobbes introduced the legal reading 'subject authorises sovereign'. With that move, Hobbes gave formal expression to the modern conception of the state as an agency-relationship between a multitude of 'principals' (the subjects or citizens) and a single 'agent' (the sovereign). Thus, the legal fiction that the State, in exercising its sovereign rule over its subjects, merely acts according to the will of its citizens firmly was put in place.[6]

No less famously, Rousseau's conception of the State is based on the notion of an autonomous collective. The social contract requires every human person who enters into the contract to give all of his possessions, all of his rights, indeed himself, in common to all the others. Thus, the social contract founds an autonomous collective. However, Rousseau set out to prove to his own satisfaction—and against Hobbes—that an autonomous collective could be a viable option, at least in theory, if certain conditions were met. The essential condition was that human nature should change, because an autonomous collective made up of natural human persons would inevitably be a Hobbesian 'war of all against all'. To meet that condition, it was necessary that a political genius—Rousseau's 'legislator'—should succeed in turning

---

[5] **Thomas Hobbes, Leviathan; Book I, Chapter 13, "Of the Naturall Condition of Mankind, as Concerning Their Felicity, and Misery".**

[6] **On the neo-Stoic and neo-sceptical origin of this 'moral alchemy of power', see Frank van Dun, 'Philosophical Statism and the Illusions of Citizenship', in B.Bouckaert & A. Godart-Van der Kroon (eds.), *Hayek Revisited* (Edward Elgar, Cheltenham, 2000), p.95-96.**

natural men and women into artificial citizens of the right kind. Rousseau's argument was that when citizens (artificial persons, 'personnes morales') take the place of human beings (natural persons, 'personnes physiques'), the autonomous collective becomes a self-governing real unity. The social contract, therefore, must be interpreted as creating a new entity, 'the People' or 'the State', which is the personified autonomous collective itself. That artificial person, however, can come to life only if the living human material that constitutes it takes the form of the Citizen—if it can de made to identify fully with the State.

Like Hobbes' citizens, Rousseau's interpret their subjection to the State as their authorisation of the State. However, in the autonomous collective of the State, Rousseau's citizens do not act according to their particular 'natural will' (their given human nature) but according to the statutory 'general will' of the collective itself (which is to become second nature to them). That general will is the same for all citizens qua citizens, because by definition a citizen qua citizen is animated by nothing else than the statutory purpose of the association. Rousseau's citizens, therefore, are committed to act according to the legal rules that express the determinations of the 'general will' in particular circumstances.

Rousseau and Hobbes, then, agreed on the thesis that the principle of freedom among likes (natural persons of the same kind)—the principle of natural law—had to be replaced by positive legislation. Rousseau, however, thought that it was theoretically possible to reproduce the formal characteristics of natural law as 'liberty and equality' for the members of an autonomous collective.[7] That was the basis of his claim to have 'squared the political circle', i.e. to have proven that the state could be legitimate, in accordance with the formal requirements of justice. Formally, his solution requires that we distinguish between natural persons and citizens (artificial persons). We have to suppose that for every Jean and Jacques, members of the same autonomous collective, there is a person that is different from both, a *citizen Jean* and a *citizen Jacques*. We also have to suppose that *as citizens* Jean and Jacques are merely numerically different manifestations or aspects of the same person, the Citizen. We can express those suppositions formally as follows:

> (p) [A!p > (#q) (-q=p & q=*c*(p))]
> *For every member of an autonomous collective there is another person who is his civic persona.*
> (p)(q) (SACpq > *c*(p) = *c*(q))
> *The civic personae of any two members of the same autonomous collective are identical.*

We should represent the relation between a natural person and his legal or civic personality (in Rousseau's theory) as follows:

> (p)[A!p > B_Lp*c*(p) & - B_L*c*(p)p)]
> *A member of an autonomous collective* legally *belongs to his own civic persona but the latter does not* legally *belong to him.*
> (x)(p) (A!p & Bxp > B_Lx*c*(p))
> *Whatever belongs to a member of an autonomous collective* legally *belongs to his civic persona.*

[7] **On the difference between 'freedom and likeness' and 'liberety and equality', see Frank van Dun, The Lawful and the Legal, *op.cit.*, especially sections 3.1 and 3.2.**

Thus, as natural persons, A and B may be members of the same autonomous collective, and then they are strictly autonomous in their dealings with one another. On the other hand, as natural persons they also legally and heteronomously belong to their own civic persona, the Citizen. They are subjects and serfs of the Citizen, who is a single sovereign person. Hence, in the State, the Citizen may use force against them to free them from their own human nature and to make them into what they have committed themselves to be by entering into the social contract: citizens. That, of course, is Rousseau's 'paradox of liberty'.[8] It is not really a paradox within his system: there is no place for free natural men in the state, as they would immediately destroy the unity that is the necessary condition of the sovereignty (hence the liberty) of the citizen. The laws liberate the citizen by coercing the human beings whose natural drives and personal interests would keep them from acting as real citizens.

Note that we had to introduce a modal notion 'belongs legally' ($B_L$xp) to make sense of the theory. Obviously, the same relation cannot express that one natural person belongs to another natural person and that one such person belongs to some artificial persona.[9] We should also note that Rousseau's 'solution' to the problem of the legitimate State rests crucially on his inversion of the natural order of things. While the common aspect-person (the Citizen) is the product of the human imagination, the theory elevates him to the status of a sovereign person for whom his creators are merely subjects and serfs. It does so by way of redefining the perspective on order among persons in terms of a modal notion B_Lx*c*(p) that requires a reference to the common aspect-person *c*(p) instead of the natural person p to whom things ordinarily belong. If it were not for that inversion of the natural order of things, the notion of an aspect-person would be unobjectionable. For example, suppose we accept:

(p) (B*c*(p)p & -Bp*c*(p))
Aspect-persons are the serfs of the persons from whom they were abstracted.

Then aspect-persons would be simply heteronomous (artificial or imaginary) persons under the responsibility of their human masters. Then, Jacques' rights-as-a-citizen could never supersede the personal rights he has as a natural person.

In the final analysis, Rousseau's theory ends up in the same corner as Hobbes'. For both, the social contract establishes a sovereign who rules his subjects, who are also his serfs. In Rousseau's approach, the social contract does so in two steps. First, it ostensibly establishes only an autonomous collective in which every persons belongs

---

[8] **"In order then that the social compact may not be an empty formula, it tacitly includes the undertaking, which alone can give force to the rest, that whoever refuses to obey the general will shall be compelled to do so by the whole body. This means nothing less than that he will be forced to be free…" J.-J. Rousseau, The Social Contract (Everyman's Library, E.P. Dutton & Co.; translated by G.D.H. Cole), Book I, chapter 7.**

[9] **Indeed, if A is a natural member of an autonomous collective and A belongs to c(A) in the same way in which he belongs to the other natural members of the collective, then c(A) would be just another member of the collective — a strictly autonomous person. Rousseau's theory of the state would then be simply Hobbes' theory of the natural condition of mankind with an additional number of ghostly fictions participating in the war of all against all. Rousseau avoided this consequence by identifying the civic personae of all members of the autonomous collective and reinterpreting the collective as a single artificial sovereign person composed not of natural persons but of citizens.**

to every other, but then this collective is personified and turned into a sovereign ruler ('the People') in its own right. That second step is accomplished by legally interpreting the autonomous collective of human persons as an autonomous collective of their identical civic personae. The latter collective, therefore, legally has only one member, the Citizen, who necessarily is autonomous and indeed sovereign. The human persons ultimately drop out of the picture. However, as in reality the transformation of men into citizens takes time, they must be given a place in the State until the transformation is complete. Their place is that of a heteronomous person, a serf. From the citizen's point of view, then, the State is not a hegemonic collective and every citizen is autonomous and sovereign. The political circle is squared. From the human point of view, however, the State is a hegemonic collective, with the citizens constituting the ruling class and the (not yet fully socialised) human persons constituting the class of serfs. From that point of view, the political circle is not squared at all. Nevertheless, Rousseau's legal pyrotechnics, masquerading as political philosophy, had a great future. It spawned a numerous offspring of ideologies of 'the republican state' and its fulfilment of the requirements of liberty and equality. In the political theory of the State, fiction trumps reality.

Rights

In this section we introduce 'rights talk', without adding anything to the theoretical apparatus we have used so far. In other words, we reduce the notion of rights fully to the notion of 'belonging'.[10] First, we define the notion of a right to deny a person the use of some means.

(DR1) Dpxq =: (Bxp v Bqp) & -Bpq
P has right to deny Q the use of X =: either X or Q belongs to P and P does not belong to Q.

Note that this definition merely states the truth-conditions of statements of the form specified in the definiendum. Thus, to refute the claim that P has right to deny Q the use of X, one may point out that neither X nor Q belongs to P, or that P is a serf or subject of Q. As immediate consequences we have

TR1) (p) –Dppp
No person has right to deny himself the use of himself.
TR2) (p)(x) (Dpxp > Bxp)
A person P has right to deny himself the use of X only if X belongs to him.

We use the concept Dpxq to define the much more common notions of having right to the use of some means without the consent of some person, and of having an absolute right to the use of some means.

(DR2) Rpxq =: Bxp & -Dqxp

[10] **Thus, if there are several mutually irreducible modal forms of the underlying relation 'x belongs to p' then we should have several mutually irreducible modal forms of rights as well. For example, we should have 'moral rights' as well as 'lawful rights' if things may morally as well as lawfully belong to a person.**

P has right to the use of X without the consent of Q =: X belongs to P and Q has no right to deny P the use of X.

(DR3) R*px =: (q)Rpxq

P has absolute right to the use of X =: P has right to the use of X without the consent of any person.

Obviously,

TR3) (p)(q)(x) (Rpxq > -Dqxp)
If P has right to the use of X without the consent of Q, then Q has no right to deny P the use of X.

The definitions, in conjunction with the axioms of $\mathbf{L_0}$, imply that real, and only real, persons have the right to the use of themselves without their own consent:

TR4) (p) (Rppp == P_rp)

Not surprisingly, all autonomous persons, in particular sovereign, persons have the absolute right to the use of themselves.

TR6) (p) (Ap > R*pp)
TR7) (p) (Sp > R*pp)

No person has right to the use of what belongs to an independent person (a fortiori, a sovereign) person without the latter's consent.

TR8) (p)(q)(x) (Bxq & -Bqp > -Rpxq)
TR9) (p)(q)(x) (Sp & Bxp & -p=q > -Rqxp)

Of particular interest are the following theorems:

TR10) (p)(q) (Bpq > Rqpp)
If P belongs to Q then Q has right to the use of P without the latter's consent.
TR11) (x)(p)(q) (r) (Rpxq & Brq > Rpxr)
If P has right to the use of X without consent of Q then P has right to the use of X without the consent of any person that belongs to Q.

They help to explain the following theorems about strictly autonomous and heteronomous persons:

TR12) (p)(q)(x) (SACpq & Bxp > Rqxp)
A member of an autonomous collective has right to the use of any other member's means without the latter's consent.
TR13) (p)(q) (SACpq > Rpqq)
Members of the same autonomous collective have right to the use of each other without consent.
TR14) (p)(x) (Hp & Bxp > (#q) Rqxp)
For every heteronomous person P there is another person Q who has right to the use of P's means without the latter's consent.
TR15) (p)(x) (Hp & Bxp > (#q) –Rpxq)

For every means X that belongs to a heteronomous person P there is a person Q without whose consent P has no right to the use of X.
TR16) (p) (Hp > (#q) Rqpp)
For every heteronomous person P there is a person Q who has right to the use of P without the latter's consent.

Property

Our basic relation 'x belongs to p' can be interpreted as a property-relation. However, we easily can define some forms of property, such as common property, communal property and ownership, in its terms.

(DY1) Oxp =: Bxp & (q)(Bxq > Bqp)
P owns X =: X belongs to P and to no person that does not belong to P.[11]

It follows that an imaginary person cannot own what belongs to it. To put this differently, an owner must be a real person:

TY1) (x)(p) (Oxp > P_rp)
Only real persons own anything.
TY2) (x)(p) (Oxp > Ap)
Only autonomous persons own anything.
TY3) (x)(p) (Hp > -Oxp)
No heteronomous person owns anything.
TY4) (p) (Sp > Opp)
Only self-owners are sovereign.
TY5) (p) (Ap > Opp)
Every autonomous person is a self-owner.
TY6) (p) (Opp > Ap)
Every self-owner is an autonomous person.

With respect to autonomous collectives, we have

TY7) (x)(p)(q)(A!p & Oxp & Bpq > Oxq)
If a member of an autonomous collective owns X then every member of that collective owns X.

Thus, the members of an autonomous collective have collective ownership of every means that is owned by any member.

(DY2) $C_n$xpq =: Bxp & Bxq
X is common property of P and Q =: X belongs to P and to Q.
(DY3) $C_l$xpq =: Rpxq & Rqxp
X is communal property of P and Q =: P and Q have right to the use of X without the consent of each other.

[11] **Under this definition, a ruler can own what belongs to his subjects. A stricter notion of ownership would be Bxp & (q)(Bxq > p=q).**

TY8) (x)(p)(q) ($C_l$xpq > $C_n$xpq)
Only common property is communal property.
TY9) (x)(p)(q)($C_l$xpq > Bpq & Bqp)
If P and Q have communal property then they belong to one another.
TY10) (x)(p)(q) (Bpq & -Bqp > -$C_l$xpq)
There is no communal property between master and serf.
TY11) (x)(p)(q)($C_l$xpq > -Sp & -Sq)
If X is communal property of P and Q then neither P nor Q is a sovereign person.
TY12) (p)(q) (x) (SACpq & Bxp > $C_l$xpq)
Whatever belongs to any member of an autonomous collective is communal property of all its members.

Obviously, in an autonomous collective, collective ownership implies communal property. However, something may be the communal property of the members yet no one of them may have right to its use without the consent of some person who is not a member of the collective. A sovereign person, in contrast, may have common property with others, but no communal property.

Actions

The system L_1. We now expand the domain **D(L_0)** of the theory and add a separate category of objects that we call 'actions'.[12] Let **D(L_1)** be the name of the expanded domain. As variables for actions, we use i, j, …. The corresponding constants are g, h (possibly with subscripts or superscripts).

The actions-domain is linked to the original objects-domain by means of two primitive predicators U*io* and V*io*. We read them as 'action *i* uses *o*' (U*io*) and 'action *i* affects *o*' (V*io*). Obviously, we need to add the formulas 'Uio' and 'Vio' to the primitives of **L_0** to generate an expanded language **L_1** to speak about **D(L1)**. As most material theories of law make the distinction between 'use' and 'affect' in one way or another, it is not amiss to make room for it in our formal theory.[13] However, whether and how to distinguish cases where an action uses or affects some means or person, are not matters that we can decide with the formal apparatus.

The use of the added primitive predicators is constrained by four axioms:

($A_1$1) (i)(x)(Uix > Vix)
Every action that uses a means affects it.
($A_1$2) (i)(#x) Uix
Every action uses at least one means.
($A_1$3) (x)(#i) Uix
For every means there is an action that uses it.
($A_1$4) (i)(x)(p) (Vix & Bxp > Vip)
An action that affects a means that belongs to a person, affects that person.

---

[12] **One may well have serious misgivings about treating actions (or, more generally, events) as 'objects'; however, they are not pertinent here since our treatment is purely formal and thus does not involve us in any ontological argument.**

[13] **Obviously, as with 'belong to', particular theories of law may postulate the co-existence of several irreducible modal forms of 'use' and 'affect'.**

The first axiom requires us to interpret Uix and Vix in such a way that whenever U holds for some pair (i,x) V holds for the same pair. However, it allows us to consider that with respect to some such pair V holds but U does not: an action may 'affect' a means without 'using' it. The second and the third axioms ensure that there is always some connection between an element in the domain of means and some element in the domain of actions, and vice versa. The fourth axiom stipulates that an action that affects a means (in a way that is relevant from the point of view of law) also affects the person(s) to whom that means belongs.

From the perspective of a theory of law, the primary purpose of introducing the concept of action is to answer questions about what sort of things a person has, or does not have, the right to do. To achieve that purpose, we first define with respect to actions some concepts that are analogous to those that we introduced earlier:

(DA1) $D^a piq$ =: (#x)(Vix & Dpxq)
P has right to deny Q to do I =: P has right to deny Q the use of some means that I affects.

(DA2) $R^a piq$ =: (x)(Vix > Rpxq)
P has right to do I without the consent of Q =: P has right to the use, without the consent of Q, of all means that are affected by I.[14]

The following definitions extend concepts of property and ownership to actions:

(DA3) $B^a ip$ =: (x) (Vix > Bxp)
Action I belongs to P =: All the means that I affects belong to P.

(DA4) $O^a ip$ =: (x) (Vix > Oxp)
P owns action I =: P owns all the means that I affects.

Among the theorems that we can prove, we note the following:

TA1) (i)(p)(q)(x) (Vix & Bxq & $R^a piq$ > Bqp)
If action I affects property of Q then P has right to do I without the consent of Q only if Q belongs to P.

Concerning the property of actions, we may note these theorems:

TA2) (i)(p)(q) ($B^a ip$ & Sp & $R^a qip$ > p=q)
If action I belongs to sovereign person P then no other person has right to do I without the consent of P.
TA3) (i)(p)(q) ($O^a ip$ > $R^a piq$)
If P owns I then P has the right to do I without the consent of any Q.
TA4) (i)(p) (Hp > -$O^a ip$)
No heteronomous person owns any action.

Again, we have theorems that illustrate the perfect communism of autonomous collectives

[14] **We can define similar but slightly different concepts by substituting 'Uix' for 'Vix' in the defining formulas of DA1 and DA2. However, in this presentation we shall not consider such variants as they appear to be less commonly used.**

TA5) (i)(p)(q)(r) (SACpq & R^apir > R^aqir)
If one member of an autonomous collective has the right to do an action without the consent of a person R, then so does every other member.
TA6) (i)(p)(q) (SACpq & O^aip > O^aiq)
If any member of an autonomous collective owns an action, then so does every other member.
TA7) (i)(p)(q) (SACpq > -D^apiq)
No member of an autonomous collective has right to deny any action to any other member.

By means of the fourth action-axiom we can prove the equivalence

TA8) (i)(p)(q) (R^apiq == B^aip & (B^aiq v Bpq > Bqp))
P has the right to do I without consent of Q if and only if action I belongs to P and if either I belongs to Q or P belongs to Q then Q belongs to P.

Thus, R^apiq turns out to be formally analogous to Rpxq, which was defined as Bxp & (Bxq v Bpq > Bqp).

Generic actions

We should think of the objects ('actions') that we introduced to define the expanded domain $\mathbf{D(L_1)}$ as concrete individual actions. They are fully specified action-events except that the specification does not mention who performs the action. Normally, of course, we refer only to kinds of actions, such as going to the hospital, reading a book, etc. Such 'generic actions' typically can be instantiated in many different ways, each of which may be different from other instantiations with respect to the means it uses or affects. To accommodate references to generic actions, we can use action-predicates such as 'action I is of kind Z'. The basic structure of the logic of rights to do actions of some kind or other then comes into view.

We read Zi as 'I is an action of kind Z', where Z can be any action-predicate. We should now be able to define, say, the concept of having right to do some kind of action. However, because of the high level of abstraction of such a definition, there may be no intuitively straightforward way to do this. For example, we could define

(da5) R^apZq =: (#i) (Zi & R^apiq)
P has the right to Z without the consent of Q =: There is at least one action I of kind Z such that P has the right to do I without the consent of Q.

Alternatively, we could define

(da6) R^apZq=: (i) (Zi > R^apiq)
P has right to Z without the consent of Q =: P has right to do any action of kind Z, without consent of Q

The two definitions obviously are different. The concept of right that is defined in da6 is in a way 'stronger' than the concept defined in da5. Logically speaking, both are equally 'correct'. However, in their use of the expression 'has right to do' some material theories may exhibit a preference for one of those notions over the other. Perhaps the same theory uses that expression now in one sense, then in another. Of

course, a theory cannot be charged with logical inconsistency merely because it uses the same words in different senses, but it certainly may give rise to unnecessary confusion. To avoid such confusion here, we introduce a terminological distinction between da5 and da6, which we indicate by means of the superscripts 'w' and 's'. Thus, we write $R^{aw}pZq$ or *L*pZq for the concept defined in DA5; we read it as '*P has a weak right to Z without consent of Q*' or as '*P has liberty to Z without consent of Q*'. For the concept defined in DA6, we write $R^{as}pZq$ or *R*pZq, which we read as '*P has* [a strong] *right to Z without consent of Q*'.

(DA5) *L*pZq =: $R^{aw}pZq$ =: (#i) (Zi & $R^{a}piq$)
P has liberty to Z without the consent of Q =: There is at least one action I of kind Z such that P has the right to do I without the consent of Q.
(DA6) *R*pZq =: $R^{as}pZq$=: (i) (Zi > $R^{a}piq$)
P has right to Z without the consent of Q =: P has right to do any action of kind Z, without consent of Q

We do not claim that this distinction between 'has liberty' and 'has right' is generally accepted. However, the important thing is to get the logic right, not to make a fetish out of particular words.

One advantage of introducing general action-predicates is that we can negate and logically combine them, which we cannot do with action-objects. Thus, substitution of '–Z' for 'Z' in the defining part of DA5 gives us a definition of 'the liberty not to Z':

(p)(q) (*L*p-Zq == (#i) (-Zi & $R^{a}piq$)
P has liberty not to Z without consent of Q if and only if there is at least one action I that is not of the kind Z and P has the right to do I without Q's consent. Hence,
(p)(q) (-*L*p-Zq == (i) ($R^{a}piq$ > Zi)
P does not have liberty not to Z without consent of Q if and only if all actions that P has the right to do without consent of Q are of kind Z.

Substituting '-Z' for 'Z' in DA6 gives us a definition of 'the right not to Z':

(p)(q) (*R*p-Zq == (i) (-Zi > $R^{a}piq$)
P has right not to Z without consent of Q if and only if P has right to do, without consent of Q, any action that is not of the kind Z. Hence,
(p)(q) (-*R*p-Zq == (#i) (-Zi & -$R^{a}piq$)
P does not have right not to Z without consent of Q if and only if there is an action I that is not of kind Z and P does not have right to do I without consent of Q.

A peculiar logical property of the definitions is that every person has right to do any action of an impossible kind as well as any action of a kind that has no instantiation. An action of the kind 'Zi & -Zi' would be impossible. On the other hand, an action of the kind 'cloning the universe', which presumably is not logically impossible, does not at present exist. For kinds of actions that do have instantiations, we have the theorem

(p)(q) ((#i) Zi > (*R*pZq > *L*pZq))

If Z can be instantiated and P has right to Z without consent of Q, then P has liberty to Z without consent of Q.

With respect to 'liberty to do', we note the following theorems

(p) ((q) *L*pZq > Ap)
If P has liberty to Z without anybody's consent, then P is an autonomous person.
(p) ((q) *R*pZq & (r) -*L*rZp > Sp)
If P has liberty to Z without anybody's consent and no one has liberty to Z without P's consent, then P is a sovereign person.

We can use expressions of the form $R^{a.}$pZq to define corresponding notions of obligation.

(DA7) O_spZq =: -*L*p-Zq
P is under a strong obligation to Q to Z =: P does not have liberty not to Z without consent of Q.
(DA8) O_wpZq =: -*R*p-Zq
P is under a weak obligation to Q to Z =: P does not have the right not to Z without consent of Q.

Note that strong obligation is defined in terms of weak rights and weak obligation in terms of strong rights. Keeping that in mind, we now can make sense of the following schemes:

(p)(q) ($O_.$pZq == -$R^{a.}$p-Zq)
(p)(q) ($O_.$p-Zq == -$R^{a.}$pZq)
(p)(q) (-$O_.$pZq == $R^{a.}$p-Zq)
(p)(q) (-$O_.$p-Zq) == $R^{a.}$pZq)

We have, for example, the theorem

(p)(q) (O_spZq == (i) (R^apiq > Zi)
P is under a strong obligation to Q to Z if and only if all actions that P has right to do without consent of Q are of kind Z.

Let us now define a person's freedom to do some generic action. We have to distinguish two cases. On the one hand, we often use 'P is free to Z' to express the idea that P is free to Z or not to Z. On the other hand, we do not always mean to imply that P is free not to Z. One may be free to repay a debt, yet not be free not to repay it.

(DF1) F_1pZ =: (#i)(q) (-p=q > Zi & R^apiq)
P is free to Z =: There is an action I of kind Z, such that P has right to do I without the consent of any other person.
(DF2) F_2pZ =: F_1pZ & F_1p-Z
P is free to Z or not to Z=: P is free to Z and P is free not to Z.

We have the following theorem

(p) (F_1pZ > Ap)
If P is free to Z then P is an autonomous person

Also, if P is free to Z, then P is under no strong obligation to any other person not to Z; that is to say, he then has liberty to Z without the consent of any other.

(p) (F_1pZ > (q) (-p=q > -O_sp-Zq))
(p) (F_1pZ > (q) (-p=q > LpZq))

However, that, with respect to any other person, P has liberty to Z without that person's consent does not imply that P is free to Z. There may be different ways in which to Z. For any other person Q, there may be a way of Z-ing such that P has right to Z in that way without Q's consent. It does not follow that there is a way of Z-ing such that there is no person Q without whose consent P has right to Z in that particular way. Formally, that is a consequence of the different order of the quantifiers in relevant the definitions of 'liberty' and 'freedom': (q)(#i)… in the one case; (#i)(q)… in the other.

We already have used a few action-predicates: Vix and Uix. Thus, under the conventions adopted in this section, we can consider expressions such as LpVxq (i.e. R^{aw}pVxq: 'P has liberty to affect X without consent of Q') and RpUxq (i.e. R^{aw}pUxq: 'P has liberty to use X without consent of Q'). We can prove

(x)(p)(q) (LpUxq == Rpxq)
P has liberty to use X without consent of Q if and only if P has right to the use of X without Q's consent.
(x)(p) ((q) LpUxq > Oxp)
If P has liberty to use X without anybody's consent then P owns X

In other words, ownership is a necessary (but it is not a sufficient) condition for the liberty to use a means without anybody's consent. The reason why it is not a sufficient condition is that there may be no action that uses the means one owns that does not have significant side-effects on other means.

Kinds of actions are often identified in terms of the effects of actions. Let us introduce binary predicates of the form 'action I produces state of affairs S' and represent them by expressions of the form 'i»S'. Then we can read 'Lp»Sq' as 'P has liberty to produce S without consent of Q' and interpret it as '(#i) (i»S & R^apiq)'. We can read 'O_sp»Sq' as 'P is under a strong obligation to Q to produce S' and interpret it as '(i) (R^apiq > -i»-S). In words, P is under a strong obligation to Q to produce S if and only if no action that P has right to perform without consent of Q produces not–S.

Let us consider a state of affairs S' such that any action that puts a means (or a person) in that state affects that means (or person) in a way that is significant or relevant from the point of view of the law: (i) (i»S'x > Vix). When that condition holds for a means X, we shall write VS'x—which we may read as: S' is a V-state for X. An example of a V-state for a means X could be 'X is destroyed'. We can prove

(x)(p)(q) (VS'x & Bxp & -Bpq > -Lq»S'xp)

No person has liberty to put what belongs to an independent person in V-state S' without that person's consent.
(p)(q) (VS'p & -Bpq > -*L*q»S'pp)
No one has liberty to put an independent person in V-state S' without his consent.

Suppose, for example, that –Ip (i.e. 'P is not innocent') is a V-state for P—every action that puts P in a condition where P is not innocent, relevantly affects P. Then, with the possible exception of P's masters or rulers, no one has liberty to make it happen that P loses his innocence without his consent. No one lawfully can make an independent person lose his innocence without his consent. Also

(p) (VS'p & P_fp > (q) (-p=q > -*L*q»S'pp))
No other person has liberty to put a free person in V-state S' without his consent.

For example, if -P_fq ('Q is not a free person') is a V-state for a free person Q, then every other person is under a strong obligation to Q not make him lose his freedom. Consequently, an action that makes Q lose his freedom must be undertaken with the consent of Q himself. No free person can lose his freedom against his will.

Let us now consider a state of affairs S" such that any action that puts a means (or person) in that state is one that no person has right to do unless possibly with the consent of every person: (i)(x)(p)(q) (i»S"x > -R^apiq). To put this differently: if action I produces S", then there is no person Q without whose consent P has right to do I. We may call S"x an excluded or X-state: XS"x. Obviously, no person has liberty to put any means or person in an X-state unless, perhaps, he does so with the consent of every person:

(x)(p)(q) (XS"x > -*L*p»S"xq)
(p)(q)(r) (XS"q > -*L*p»S"qr)

Let us assume that 'no innocence' is an X-state for any person. Then,

(p)(q)(r) -*L*p»-Iqr
There is no person R without whose consent P has liberty to deprive a person Q of his innocence.
(p)(q) -*L*p»-Ipq
There is no person Q without whose consent P has liberty to deprive himself of his innocence.

If we assume further that every action that puts a free person in a condition where he is no longer free makes him lose his innocence, then—given that we still assume that 'not innocent' is an X-state for any person—it follows that

(p)(q) (P_fp > - *L*p»-$P_f$pq)
There is no person Q without whose consent a free person P has liberty to deprive himself of his freedom.

The same result follows in a more immediate fashion from the alternative assumption that 'no freedom' is an X-state for a free person. Presumably, that assumption

captures the essence of the thesis that freedom is an inalienable right. By analogy, the assumption that 'no innocence' is an X-state for any person would represent the thesis that 'innocence' is an inalienable right. Whether a particular theory of law does or should consider –Ip (or any other condition) to be an X-state, is not a matter that can be decided on formal grounds.

Clearly, under the systematisation that we develop here, we can give plausible definitions of concepts such as freedom and obligation in terms of the fundamental relations Bxp, Uix and Vix. We can easily add more definitions and derive more theorems but we shall not do so. In any case, it should be clear that $\mathbf{L_0}$ and $\mathbf{L_1}$ are useful tools for formalising significant parts of our thinking about law.

General Principle of Justice

It is time to turn our attention to the predicator I_{o_1}, which is a primitive of $\mathbf{L_0}$. Its use is constrained by the axiom

($A_0$3) (o)(Io > (#p)(p=o))
A lawfully innocent object is a person.

In other words, only persons can be innocent in law—which is not to say, of course, that only innocents can be persons. A given material theory of law, indeed, might postulate that the concept of innocence does not apply to some persons or classes of persons (for example, imaginary persons). Nor is it logically necessary for such a theory to assume that, for a person, the loss of innocence entails the loss of his status as a person in law. We use the concept of an innocent person to formulate a general principle of personal justice.

General principle of justice (GJ) : **Only innocent persons are free.**

[(p)(P_fp > Ip)]. Notice that GJ does not specify that in justice all innocent persons are free persons. Such a specification would not make sense in the formal theory of law, which does not specify the material conditions that are necessary or sufficient for ascertaining that a particular person is innocent or not. Thus, a material theory of law might permit us to say that a slave, serf or subject is innocent without compelling us to say that he is a free person. GJ only rules out that we consider a person lawfully free but not lawfully innocent. Thus, a person who is not lawfully innocent cannot be considered in justice to be lawfully free—and therefore to belong only to himself. He must have done something or something must have happened that gave some other person a lawful claim to his person. A non-innocent person always belongs to some other person. While this does not exclude him from being a member of an autonomous collective, it does rule out that he is a sovereign person.

In the formal theory, it follows from GJ that

TG1) (p)((q) p=q > Ip)
If some person is the only person in the world, he is innocent.
If there is a non-innocent person, there must be at least two persons.
TG2) (p)-Ip > (q)-Sq
If no person is innocent, then no person is sovereign.

Consequently, if no person is innocent, then no person is free; every person belongs to some other person. Assuming that we are dealing with a finite world, we also have

TG3) (p)-Ip > (#q) A!q
If there are no innocent persons in a finite world, then some persons must be members of one or more autonomous collectives.

In a finite world without innocent persons, there are some strictly autonomous persons and maybe also some heteronomous persons, but there are no sovereign persons. Under a moralistic interpretation and as far as the human world is concerned, the doctrine of 'original sin' may be translated as the thesis that there are no innocent persons. Then autonomous and hegemonic collectives are indeed the only logically possible conditions of mankind.

SECTION II

Natural Persons and Natural Law

The system L_2. Let us return to **$D(L_0)$** to define another primitive relation between persons and means. We refer to it with the binary predicator B_n. We read the formula $B_n o_1 o_2$ as 'o_1 naturally belongs to o_2' or as 'o_1 belongs to o_2 by nature'. From **L_1**, we get to the system **L_2** by expanding the language with the new predicator and adding a few axioms that constrain its use. First of all, however, we give a definition of the concept 'natural person'.

(DN1) $P_n p =: B_n pp$
P is a natural person =: P belongs to himself by nature.

By definition of B_n, natural persons constitute a subclass of the class of persons in **$D(L_0)$.** A person who is not natural we shall call an artificial person ($P_{ar}p$). The relevant axioms for the relation $B_n xp$ are:

($A_2 1$) (p)(x) ($B_n xp > P_n p$)
Only to a natural person does any means belong naturally.
($A_2 2$) (p)(q) ($B_n pq > p=q$)
No person belongs naturally to any other person.
($A_2 3$) (p)(q)(x) ($B_n xp \& B_n xq > p=q$)
No means belongs naturally to more than one person.

The axioms make good intuitive sense if we think of human beings as natural persons. Some means belong by nature to a human person. They are his somatic means, which are embodied in his physical being and which are under his control in a way in which no other (extra-somatic) means is or can be. With respect to, say, a corporation, the concept of a means that belongs to it by nature does not make sense. As for the second axiom, no human person belongs by nature to any other person, whether human or not. No person has control over a human person or his body in the same natural immediate way in which he has control over himself or his body and its parts. Axiom 3 captures the separate existence of natural human persons, at least in the sense that

those parts of the world that naturally belong to one such person (his body, its limbs and other somatic means) do not and cannot in the same way belong to another.[15] Clearly,

> TN1) (p) (P_np > (#x) $B_n$xp)
> *For every natural person, there is some means that naturally belongs to him.*
> TN2) (p)(q) (P_np & P_nq & -p=q > (#x) ($B_n$xp & -$B_n$xq))
> *For every pair of natural persons, there is a means that naturally belongs to one of the pair but not to the other.*

The axioms exclude the possibility of one person being by nature the serf or subject of another. Consequently, we cannot define, in terms of $B_n$xp, a concept analogous to that of an autonomous collective.

Legal positivists might object to the use of the term 'natural' in connection with persons. However, the term is not important. Another term, say 'necessary', might do as well. What is important is that we have at our disposal a concept of a person that is independent of the concept of a person as defined in the general theory of law, yet sufficiently similar to be subsumed under the latter theory. Although we may believe that human persons are natural persons, and perhaps the only natural persons, we cannot charge a purely formal theory with these assumptions.

Natural law theorists focus on natural persons (in an ordinary sense of the word 'natural') as the persons whose existence is necessary to make sense of law as an order of persons. From their point of view, all other orders of persons—for example, orders of artificial persons such as corporations or states—are 'law' only by analogy to the natural order of human persons. In contrast with the natural law theorists, positivists deal primarily with what they call 'legal persons'. Some of those, for example states or in more abstract language 'legal systems', they treat as theoretical representations of pre-existing data from which any legal analysis must start. They are the 'legally necessary persons' that serve to anchor the positivists' theoretical constructions in some reality that is not itself one of those constructions. The existence of those particular legal persons is a necessary supposition of any (positivistic) theory of law. Other legal persons have no axiomatic or 'legally necessary' existence. Hence there is nothing that belongs to them as a matter of legal necessity and nothing to which they belong as a matter of legal necessity. They are legal persons only if and because they stand in some legally relevant relation to one of the axiomatically acknowledged legally necessary anchorpersons. That relation — and not any material condition per se — is what determines their status as legal persons in some legal system. Even to a legal positivist, then, something must be 'given' if his theory is to have any relevance. He may refuse to talk about human beings as natural persons (in the common sense of the word 'natutal') and about their natural rights, but he too must acknowledge that his theories are about things to which the formal concept of law applies.

---

[15] **Viable Siamese twins do not appear to be exceptions. If viable, even craniothoracopagus twins, or twins joined at the head and chest, with only one brain, one heart and combined gastrointestinal tracts, presumably would be one person with more controllable [lower] limbs than an ordinary person would have. Viable twins usually are two persons whose bodies happen to be linked in a particular way, each one having natural or immediate control only over his or her own limbs and other somatic means.**

A positivist, therefore, need not object to the axioms **$A_2$1-3**, if he reads $B_n$xp as 'x belongs as a matter of legal necessity to p' and P_np as 'p is a legally necessary person', or in some similar fashion. If a reader so wishes, he may substitute such readings wherever the text has 'natural', 'naturally' or 'by nature'. However, he will find that the axioms more readily yield an intuitively convincing interpretation when we apply them to human beings than when we apply them to abstract constructions such as states or social systems. That is no defect of the axioms but a consequence of the fact that we can understand a positivistic theory of artificial persons only through the analogy with real human persons. In any case, a positivistic theory of 'legal necessity' is formally equivalent to a theory of natural law, no matter how much its material interpretations differ from it. The difference between natural law theory (as the theory of law of natural persons, in the ordinary sense of the words) and legal positivism cannot, and should not be made, at the level of our formal theory. We can introduce it in that theory at best by means of special differentiating postulates. In the next subsection, we shall give some postulates for the theory of natural law in the ordinary sense of an order of natural human persons. However, even there the postulates that we shall discuss might turn out, under a different reading, to be acceptable to legal positivists. However, the question whether that is the case or not, shall not concern us.

The Postulates of Natural Law

With the system **L_2** we are in a position to begin to make sense of natural law as an order of natural persons (as defined in the previous section). To do that, we need to introduce some postulates of natural law. They are intended to capture the distinctive convictions that make up the idea of a natural order or law of persons, as far as we can express them in our formal system. They also provide a logical link between, on the one hand, the concepts of a natural person and what naturally belongs to him and, on the other hand, the general theory of law as an order of persons.

Postulate of Finitism (PF) : **The number of natural persons is finite.**

No matter what a material theory of law may say about other sorts of persons, it cannot be a theory of natural law unless it denies that there is at any time an actual infinity of natural persons.

Postulate of Naturalism (PN) : **Every means belongs to at least one natural person.**

[(x)(#q)(Bxq & P_nq)]. Note that the postulate says 'belongs', not 'belongs by nature'. According to Naturalism the responsibility for any means or person—and therefore for any action—ultimately always rests with a natural person. Adding this postulate to our formal apparatus, we can deduce a number of interesting theorems.

NL1) (p)(#q) (Bpq & P_nq)
Every person belongs to at least one natural person.
NL2) (p) (P_fp > P_np)
Only natural persons are free.
NL3) (p) (Sp > P_np)
Only natural persons are sovereign.

Thus, Naturalism forces any natural law theory that assigns sovereignty to a person of whatever kind to classify such a person as a 'natural' one. In conjunction with the postulate of finitism, Naturalism implies that not every natural person can be heteronomous, i.e. that some natural persons must be autonomous. Indeed, according to PN every person belongs to some natural person. Consequently, a heteronomous natural person must belong to some other natural person who does not belong to him. However, if *every* natural person is heteronomous, there must be an infinite supply of such persons—which contradicts the postulate of finitism.

NL4) (#p) (P_np & Ap)
There is at least one autonomous natural person.

Thus, given the postulates of finitism and naturalism, we can deduce that either some natural persons are sovereign or some of them are members of one or more autonomous collectives.

In addition to the postulates of finitism and naturalism, which determine the basic structure of natural law, we have two postulates that determine the relations between $B_n$xp and Bxp, i.e. between what naturally belongs to a person and what lawfully belongs to him.

Postulate of Consistency (PC) : **What belongs naturally to a person lawfully belongs to him.**

[(p)(x) ($B_n$xp > Bxp)]. A natural law theory holds that whenever it is established that something belongs naturally to a person, that fact is enough to say that the thing in question is the lawful property of that person. From the postulate of consistency and **$A_0$2**, we deduce

NL5) (p) (P_np > P_rp)
Only real persons are natural persons.
NL6) (p)(q)(x) ($B_n$xp & Bpq > Bxq)
What belongs naturally to a person, belongs to whomever he belongs to.

Postulate of Individualism (PI) : **What belongs naturally to a person belongs only to those persons to whom he belongs**

[(p)(q)(x) ($B_n$xp & Bxq > Bpq)]. There can be no claim to a person's natural property that is separate from a claim to that person himself. In short, in natural law, the natural property of a person is inseparable from the person whose natural property it is.

From the postulates of individualism and consistency it follows that

NL7) (p)(q)(x) ($B_n$xp > (Bxq == Bpq))
What belongs naturally to a person P belongs to another person Q if and only if P belongs to Q.
NL8) (p)(q)(x) ($B_n$xp & Dqxp > Bpq)
Q has right to deny P the use of what naturally belongs to P only if P belongs to Q.
NL9) (p)(q) (P_np & Dqpp > Bpq)

Q has right to deny a natural person P the use of himself only if P belongs to Q

The Principle of Natural Justice

Earlier we stated a general principle of personal justice: (p) (P_fp > Ip). Here we should add what I take to be the principle of personal justice in natural law. To simplify formulas, we define the shorthand I_n ('is an innocent natural person') as follows

I_np =: P_np & Ip

Principle of natural personal justice (NJ) : **Innocent natural persons are free.**

[(p) (I_np > P_fp)]. In natural law, a person who is not free is either an artificial person or else not an innocent person. Together with the general principle of justice, this gives us

NJ1) (p) (P_np > (P_fp = Ip))
A natural person is free if and only if he is innocent.

'Natural personal justice' and 'consistency' entail

NJ2) (p) (I_np > Ap)
An innocent natural person is autonomous.
No innocent natural person is heteronomous.
NJ3) (p) (I_np > -A!p)
No innocent natural person is strictly autonomous (i.e. *a member of an autonomous collective*).
NJ4) (p) (P_np > (Sp == Ip))
A natural person is sovereign if and only if he is innocent.

Thus, there is no innocent way in which a natural person can deprive himself of his freedom or sovereignty by making another person responsible for him—either as his master in a hegemonic relationship or as his ruler-and-subject in an autonomous collective. Other consequences of the principles of natural justice are

NJ5) (p)(q) (I_np & I_nq & -p=q > (#x)(Bxp & -Bxq))
For every pair of innocent natural persons, some means belong(s) to only one of them.
NJ6) (p) (I_np > (#x)(q)(-p=q > Bxp & -Bxq))
For every innocent natural person, there is a means that belongs exclusively to him.
NJ7) (p)(q)(x) ($B_n$xp & Bxq & Ip > p=q)
What belongs naturally to an innocent person belongs to him exclusively.
NJ8) (p)(x) ($B_n$xp & Ip > Oxp)
An innocent person owns what naturally belongs to him.

Natural Rights

We have seen that the class of persons can be partitioned in three jointly exhaustive but mutually exclusive subclasses of sovereign, heteronomous and strictly autonomous persons. In short, the status of a person in law is 'sovereignty', 'strict autonomy' or 'heteronomy'. In view of that fact, we can make an exhaustive list of all logically possible types of theories of order among natural persons (theories of natural law or natural rights), subject only to a few straightforward conditions. First, we consider only theories concerning the original status in law of natural persons. Obviously, a person's status may change, for example as a result of some action by that person or another. Thus, a man may commit a crime and thereby lose the status he had as long as he was innocent of any crime. Also, a master or ruler may change the status of his serfs or subjects by an act of emancipation. However, such changes obviously presuppose that the person in question had a status in law to begin with. We can distinguish therefore between theories of natural rights by noting the original status they assign to a natural person — in short, the status they assign to an innocent natural person.

Second, we consider only theories that refer to natural persons as such. We have seen in our discussion of Rousseau that we can consider natural persons under a certain aspect, e.g. as citizens, and assume that they accordingly have rights not as natural persons but as citizens. However, the aspects under which we can consider natural persons are innumerable and do not form a closed set. Therefore it is pointless to try to list all possible 'aspect-persons' *a*(P), *b*(P), *c*(P), … that we might associate with any particular natural person. A theory of law that took aspect-persons as its starting point would be indeterminate. It would allow us to say that P is one person but also that, from the point of view of law, *w*(P), e.g. P-as-a-woman, is a different person with a different set of rights. Similar constructions are possible, as the case may be, for P's rights as a member of some 'minority' or other, a worker, a child, a pensioner, a veteran, an obese person, and so on and so forth. The multiplication of persons would apply to every natural person P. It is then all too tempting to dismiss P altogether and simply add P-as-a-human-being, say *h*(P), to the list of aspect-persons. As soon as we admit aspect-persons as persons in their own right — and not simply as heteronomous serfs of a natural person —, we can assign a different status in law to each aspect. Consequently, a natural person P, considered under one aspect, say *a*(P), might be sovereign and at the same time, considered under another aspect, say *b*(P), heteronomous or a member of this or that autonomous collective — yet P himself need not have a status in law. In short, P is no person and has no rights unless someone classifies him as a member of some relevant group or category. Arguably, that is very nearly the ruling conception of persons and rights in fashionable opinion today. However, it is indicative of a complete dissociation of the concepts of 'person' and 'rights' from any reality. With the suggestion that a natural person is simply a 'theoretical construct', the result of assembling apparently pre-existing different aspect-persons, it is also a denial of the proposition that a natural person *is* an individual person.

Leaving aside then those aspect-persons, we see that there are only so many logically different types of theories of natural rights. We have listed them in the following table. The column 'S' has an entry '*' for types of theories that assign at least one natural person the original status of a sovereign person. Similarly, column 'A!', respectively 'H,' has an '*' for types of theories that assign at least one natural person the original status of a member of an autonomous collective, respectively the

original status of a heteronomous person. Column 'M' identifies types of theories that deny personal standing to at least one natural person (giving him the status of a mere means). Theories of type 0 assign no natural person any status in law, neither as a person nor as a means. Such theories consider natural persons as mere objects. (I shall not consider types of theories — they are not even listed in the table — that assign only some natural persons the status of a mere object).

TType	S	A!	H	M	Original status in law of natural persons
Equal original status for all					
0					None has a status in law, all are mere objects
1	*				All sovereign
2		*			All strictly autonomous
3			*		All heteronomous
4				*	None is a person, all are mere means
Unequal original status					
5	*	*			All autonomous but only some sovereign
6	*		*		Some sovereign, the rest heteronomous
7	*			*	Some sovereign, the rest mere means
8		*	*		Some strictly autonomous, the rest heteronomous
9		*		*	Some strictly autonomous, the rest mere means
10			*	*	Some heteronomous, the rest mere means
11	*	*	*		Some autonomous, the rest heteronomous
12	*	*		*	Some autonomous, the rest mere means
13	*		*	*	Some sovereign, the rest heteronomous or mere means
14		*	*	*	Some strictly autonomous, some heteronomous, etc.
15	*	*	*	*	Some of every kind

Obviously, the information that a theory assigns an equal status to all natural persons does not tell what that status is. However, the 'equal status' types of theories are philosophically speaking considerably less demanding than the 'unequal status' types. In particular, they need no justifying argument for discriminating among innocent natural persons. An argument for assigning to such persons one status rather than another is all they need to provide. Note, however, that a theory of a type that assigns the original status of a member of an autonomous collective to some or all innocent natural persons need not assign all of them to the same collective. Similarly, theories that originally assign an heteronomous status to some or all innocent natural persons need not assign them all to the same masters. Finally, theories that assign the status of a mere means to some or all innocent natural persons need not assign them to be property of the same person. Theories of types 2, 3 and 4, then, require not only an argument for justifying their pick of the original status in law of any natural person, but also an argument justifying a particular distribution of natural persons among an untold number of autonomous collectives, hegemonic collectives or non-natural persons. Only theories of type 1, which assert that every natural person originally (in his state of innocence) is a sovereign person, avoid those complications of discrimination and distribution. In fact, formally speaking, there is only one such theory, although there may still be any number of schemes of interpreting it in terms of real things and relations.

None of those observations constitute a convincing argument for the type 1 theory of natural rights or against any of the other types. However, we should be able to

check which types of theories are compatible with the postulates of natural law and the principle of natural justice.

We assume that several natural persons exist. Because we are interested only in original rights, we assume a condition in which all natural persons are innocent: (p) ($P_n p > Ip$). We can apply directly the postulates of natural law and the principle of natural justice to the various logically possible types of natural rights theories. In that way we can eliminate those types of theories that conflict with any of those propositions.

The postulates of natural law (Finitism and Naturalism — PNL in the table below) imply that all means and all persons (including all natural persons) belong to a finite number of natural persons. Therefore at least some natural persons must be persons in the sense of the general theory of law. This consequence rules out TT0 and TT4. Moreover, the same postulates imply that there should be at least one autonomous natural person. Therefore, the postulates of natural law rule out TT3 and TT10.

According to the postulate of consistency, every natural person is a real person and therefore a person in the sense of the general theory of law. This rules out any type of theory that holds that some natural persons are not persons but mere objects or mere means. Thus, the postulate of consistency — PC in the table — eliminates TT0, TT4, TT7, TT9-10, and TT12-15.

The principle of natural personal justice states that all innocent natural persons are free and therefore sovereign. It rules out all types of theories except TT1.

TT	S	A!	H	M	PNL	PC	NJ		
0					N	N	N		
1	*								
2		*					N	V	
3			*		N		N		
4				*	N	N	N		
5	*	*					N	V	
6	*		*				N	V	
7	*			*		N	N		
8		*	*				N	V	
9		*		*		N	N		
10			*	*	N	N	N		
11	*	*	*				N	V	
12	*	*		*		N	N		
13	*		*	*		N	N		
14		*	*	*		N	N		
15	*	*	*	*		N	N		

Thus, we see that only TT1 is compatible with the postulates of natural law and the principle of natural justice.

Natural law without natural justice

In the last table of the previous section, we have marked with a ‘V’ all types of theories that satisfy the postulates of natural law but not the principle of natural

justice. They may be called types of *political* or *legal* theories of law, which separate law from justice.

Ttype	S	A!	H	M	Original status in law of natural persons
Equal original status for all					
2		*			All strictly autonomous
Unequal original status					
5	*	*			All autonomous but only some sovereign
6	*		*		Some sovereign, the rest heteronomous
8		*	*		Some strictly autonomous, the rest heteronomous
11	*	*	*		Some autonomous, the rest heteronomous

Each one of those theories implies that at least some innocent natural persons belong to another person. Moreover, they imply (by PN) that some innocent natural persons belong to at least one other natural person. Consequently, they all imply that some natural person has right to the use of another innocent natural person without the latter's consent. Thus, they imply that some natural persons have the right to rule other innocent natural persons without their consent — that is, to legislate for or to impose their 'will' on others. Theories of types TT2 and TT5 restrict this right to situations where the right to rule is mutual: it exists only within autonomous collectives. Theories of type TT6 imply that at least some natural persons are sovereign and that at least some of those have the right to rule other innocent natural persons without their consent. Theories of type TT8 imply that some natural persons are members (and therefore rulers and subjects) of autonomous collectives and rulers of other innocent natural persons who are merely subjects. Finally, type TT11 theories stipulate that some innocent natural persons are subjects of others (sovereigns or members of autonomous collectives).

The common element of those theories is the idea of one or more natural persons ruling innocent others — and that idea, disguised as the power of legislation, is very much the centrepiece of most political or legal theories of law. Clearly, all attempts to justify legislation (as distinct from contractual obligation) must reject the principle of natural justice, which is that innocent natural persons are free.

SECTION III

Human Beings and Human Law

The system L_3. We return once more to $\mathbf{D}(\mathbf{L_0})$, this time to introduce the concept of a human being. The concept is referred to with the unitary predicator μo, where o represents an object in $\mathbf{D(L_0)}$. Adding this predicator to the language of $\mathbf{L_2}$, and making the appropriate changes to the definition of well-formed formulas, we get $\mathbf{L_3}$.

Note that we do not add any axioms for μ. We do not specify in an apriori way any constraints on what a human being is supposed to be in the context of a discussion of law. Thus, we allow the acceptance of the postulate of anti-humanism:

Postulate of Anti-humanism (PP) : **No human being is a natural person.**

[(o)(p) (μo & P_np > -o=p)]. Hence: -(#p)(P_np & μp). Obviously, anti-humanism has no use for the principle of natural justice in its consideration of human beings. It may acknowledge that only innocent humans can be free persons, but it does not hold that in justice an innocent human being is entitled to freedom.

Weaker versions of anti-humanism imply that only some humans are not natural persons while others are. An anti-humanism of this sort could ride in on the back of the postulate of humanist naturalism.

Postulate of humanist naturalism (PHN) : **Every natural person is a human being.**

[(o)((#p)(P_np & o=p) > μo)]. Hence (p) (P_np > μp). PHN leaves open the weak anti-humanist possibility that some human beings are not natural persons. Moreover, it asserts that only humans are natural persons. Consequently, it is unacceptable not only to humanists but also to those who believe the natural law comprises non-human yet natural persons (gods, demons, personified historical or sociological phenomena like tribes, nations, states or whatever).

To simplify formulas, we define the shorthand I_μ ('innocent human person') as follows

$I_\mu p =: \mu p \ \& \ Ip$

In conjunction with the postulate of naturalism (PN) and the general principle of justice (GJ), the postulate of humanist naturalism implies

(p) (P_fp > I_μp)
All free persons are innocent human beings.

Radically opposed to anti-humanism is the postulate of naturalist humanism:

Postulate of naturalist humanism (PNH) : **Every human being is a natural person.**

[(o)(μo > (#p)(P_np & o=p))]. Hence, (p)(μp > P_np). Clearly, naturalist humanism in conjunction with the principle of natural justice (NJ) implies

(p) (I_μp > P_fp)
All innocent human beings are free persons.

The postulate of naturalist humanism leaves open the possibility that there are natural persons other than human beings.

The conjunction of the two postulates PNH and PHN gives us a general postulate of humanism.

Postulate of humanism (PH) : **All human beings are natural persons; nothing else is a natural person.**

[(o)((#p)(P_np & o=p) == μo)]. Hence (p) (P_np == μp). In conjunction with the postulates of natural law and the principles of general and natural justice (GJ and NJ), PH implies

(p) (P_fp == I_μp)

All and only innocent human persons are free.

Leaving aside merely fanciful and nominally possible interpretations of the concept of a natural person, we have to make do with the postulate of humanism. It implies that the original status in natural law of every human person is that of a sovereign person.[16] If we are very liberal in our ontology of the natural world, the postulate of naturalist humanism might enter as a possible candidate. However, it would bring in its wake controversies about what non-human natural persons there could be, which we could not decide by any rational method. In any case, natural justice obtains only if innocent human beings are left to be free, i.e. to belong to themselves and only to themselves.

Human Law

If we accept the postulate of humanism, then the concept of natural human law is formally unambiguous. However, it does not make any room for an original unilateral right of legislation, only for contractual obligation. In that sense, it has decidedly anarchistic implications, as indeed we should expect from any theory that takes freedom among human beings seriously. Not surprisingly, at all times major political and social thinkers have attempted to deny that conception of natural human law by attacking either the thesis that natural human persons are free or the thesis that they lawfully are all equal.

Under the postulate of naturalist humanism, all human beings are natural persons, but there may be other non-human natural persons. Assuming there are such persons, theories that assign an 'unequal original status' to natural persons nevertheless can assign an equal status to all innocent human beings (i.e. an equal original status or equal natural rights to all human beings). This opens the door for theories asserting the existence of non-human legislators that lawfully rule human beings. E.g. theories of types TT6, TT8 and TT11 may envisage that at least some non-human natural persons (gods, nations, states) are naturally autonomous while human persons are naturally heteronomous. Equality among humans is then coupled with a denial of natural justice (freedom) for all humans. Similarly, theories of types TT2 and TT5 allow us to envisage a situation in which all human beings are members of some autonomous collective or other. Again, this is consistent with an equal status for all human persons and with a denial of freedom for all human persons.

Under the postulate of humanist naturalism, all natural persons are humans but here may be human beings that are not natural but artificial persons or even mere means or objects. That gives us a possibility for asserting the right of legislation, this time for human beings that are natural persons over those that are not. Here the denial of natural justice (freedom) for some humans is a consequence of the denial of equality among humans.

It would seem that up to the middle of the eighteenth century denials of human natural law and justice generally took the form of a denial of the equality in law of all human beings. Plato argued that while equality in natural law is a fact, it nevertheless must be denied by 'the noble lie'[17] if politics is ever to rise above the institutionalisation of war. Equal human nature must be doctored by political

---

[16] **For a philosophical defence of that proposition, see F. van Dun, *Het Fundamenteel Rechtsbeginsel* (Kluiwer-Rechtswetenschappen, Antwerpen, 1983).**

[17] **Plato, *The Republic*, Book 3, 413c-415c.**

education to make it fit the requirements of inequality that political order imposes. Aristotle, in contrast, asserted that apart from a small elite of well-born, educated male Greeks, human beings are persons only in a more or less imperfect sense, naturally fit to be ruled but not to rule.[18] Equality was not a natural fact; natural inequality was real. Much later, Hobbes rested his case for the state as the source of positive legislation on the supposition that natural equality means a natural autonomous collective, which is a state of universal war. Survival requires the institutionalisation of inequality. Thus, whether inequality was seen as a natural fact (Aristotle) or a necessary condition of political existence and survival (Plato, Hobbes), equality was shunted aside so that at least some humans could be free. All of those views are compatible with humanist naturalism. Note, however, that the argument was that *natural* equality (if it existed at all) had to be sacrificed and replaced by *social* and *political* inequality. Indeed, the argument was part of the larger argument that man could only survive as a social being—that is to say, a member of a particular society or social organisation.[19]

Medieval political theology came to rest on the postulate of naturalist humanism: human beings are natural persons but God also is a person by nature. To this postulate, the theologians added the idea that only God is a sovereign person. The later scholastics turned him into the supreme legislator. Accordingly, all human beings are equally his servants and subjects. This meant human equality (as far as law is concerned) but also no freedom for any human person. The biblical notion of a covenant, which clearly separated the natural and the human from the divine, and allowed for the co-existence of God and human beings, each of them sovereign in his own domain, was thereby abandoned. Equality without freedom was sanctified. However, it logically still could be maintained that the laws of God decreed that his servants should respect one another as free persons. Thus, they might be ordered to treat one another *as if* they were free and sovereign persons, leaving the exercise of unilateral rule over any man to God and to God only. That position would have implied an affirmation of natural human equality coupled with freedom as a legal right under divine law.

From the mid-eighteenth century onwards, the natural equality of human beings was sanctified. At the same time divine law virtually was nullified. Thus, natural equality was taken for granted as the pre-eminent social and political norm—the just society had to be a society of equals. In contrast, freedom, as a natural or divinely ordained human right, rapidly lost ground. The arguments of progressive philosophy against natural law and justice began to focus on human freedom as their primary target. Rousseau, for example, turned Plato's argument concerning the dangers of equality against freedom. He argued that while human beings are in fact 'born free', they would have to trade in their human freedom for 'civic liberty' if politics is ever to rise above the institutionalisation of war—and if man is to become truly social (i.e. an inseparable part of a particular society). Civic liberty, of course, was not a natural right of human persons, but a political right of the citizen. While it implied that every citizen was at once the ruler and the subject of every other citizen, it also implied that

---

[18] **The doctrine that there are 'slaves by nature' (in book I of *Politics*) is perhaps the most telling illustration of Aristotle's attempt to justify social inequality as being 'according to nature'.**

[19] **In the terminology of 'The Lawful and The Legal', op. cit, section 4.2, we should say 'member of an exclusive society'. An exclusive society or social order (Dutch: 'maatschappij') is to be contrasted with the inclusive society or convivial order (Dutch: 'samenleving').**

natural human persons as such have no right in the state. Since citizens qua citizens were by definition essentially identical and therefore equal, only civic liberty was compatible with equality and therefore 'just'.

Marx, for his part, turned the Aristotelian argument that there is no such thing as natural equality against freedom. A true Gnostic,[20] he argued that natural human freedom was a sham, an illusion. Claims based on natural law were therefore simply false. Only man-as-Man (or rather man-as-Everything)—Marx' *universal individual*—could be truly free, but that Man was decidedly not the natural, historical human being—Marx' *particular individual*—that we know from experience. Again, the logic was that since universal individuals as such are essentially identical and therefore equal, only they could be truly 'free' without jeopardising equality. Of course, the Marxist notion of 'true freedom' was not that of natural freedom. Its basic formulation was that Man is free only to the extent that he can control the natural and social conditions of his existence. Translated into terms that take account of the existence of many individuals, it said that an individual is free only to the extent that he can control or rule others. Thus, all individuals can be free only in an autonomous collective, where everybody rules everybody. The apparent paradox of that statement is 'resolved' by shifting the focus from 'particular individuals' to 'universal Man', the common, indeed identical, aspect-person which alone has standing in the final communist society. That 'solution', of course, formally is the same as Rousseau's 'squaring of the political circle' by banishing natural human beings from the State and redefining politics as the affair of the Citizen.[21]

Rousseau's theory, with its hypostatisation of the abstract 'man-as-citizen', inaugurated the fashion of appealing to mystical aspect-persons that plagues positivist legal theory to this day. While it dispenses with pre-modern forms of the belief in non-human, non-empirical natural persons, it opens the door for a myriad of other abstractions to replace the gods of yore. Those are the superstitions we now invoke to justify political rule and legislation and to avoid the requirement of natural justice for human beings.

---

[20] See Frank van Dun, Natural Law, Liberalism, and Christianity, *The Journal of Libertarian Studies*, XV, n°3, Summer 2001, p.1-36. Also, of course, Eric Voegelin, *Modernity Without Restraint*, Edited with an Introduction by Manfred Henningsen (University of Missouri Press, 2000), passim. This is volume 5 of *The Collected Works of Eric Voegelin*: it contains his *The Political Religions*; *The New Science of Politics*; and *Science, Politics, and Gnosticism*.

[21] Just as Rousseau's State, if run by natural human beings, would be the epitome of injustice, so would Marx' communist society, if inhabited by particular individuals, be no more than 'raw communism'—'merely a *manifestation* of the vileness of private property'. (K. Marx, 'Private Property and Communism', in his *Economic and Philosophical Manuscripts*, 1844.)