A REVISION OF HOHFELD'S THEORY OF LEGAL CONCEPTS

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Hohfeld ([1]) has proposed that the legal relationships of *duty, privilege, right* and *no-right* are so related among themselves that the following equivalences hold, where for each duty D the corresponding privilege, right, and no-right are respectively P, R, and N:

X has duty D relatively to Y if and only if X does not have privilege P relatively to Y.

Y has right R relatively to X if and only if Y does not have no-right N relatively to X.

X has duty D relatively to Y if and only if Y has right R relatively to X.

Y has no-right N relatively to X if and only if X has privilege P relatively to Y.

Thus a duty and the corresponding privilege are viewed as two-termed relations that are contradictories of each other, and similary a right and the corresponding no-right are viewed as two-termed relations that are contradictories of each other. Furthermore a duty and the corresponding right are converses of each other, while a no-right and the corresponding privilege are converses of each other. Hohfeld actually speaks of «opposites» instead of contradictories, and of «correlatives» instead of converses. Hohfeld's account of these concepts may therefore be summarized by the following table:

	Opposites	*Opposites*
Correlatives	Duty	Right
Correlatives	Privilege	No-right

For example, X has the duty D of paying Y a dollar if and only

([1]) Wesley Newcomb HOHFELD, *Fundamental Legal Conceptions*, Yale University Press, New Haven, Conn., 1920. Reprinted 1964.

if X does not have the privilege P of not paying Y a dollar. Similarly, Y has the right R against X that X pay him a dollar if and only if X has the duty D to pay Y a dollar. Notice, however, that if D is the duty of paying a dollar, then the corresponding privilege P is the privilege of *not* paying a dollar, rather than the privilege of paying a dollar. Let us refer to the latter privilege as P'. Then it is seen that the privilege P, which involves the negation of a concept in D, is indeed the contradictory of D, while the privilege P', which involves the same concept as that in D, is not the contradictory of D but rather is implied by D. In other words. if X bears to Y the duty D to pay Y a dollar, then surely X has the privilege P' of paying Y a dollar but does not have the privilege P of not paying Y a dollar. Thus Hohfeld succeeds in treating privilege as the contradictory of duty, but only introducing an element of negation into the particular privilege that corresponds to a given duty. If this element of negation is not introduced, the concept of privilege is seen to be implied by the concept of duty instead of contradicted by it.

In an exactly similar way, in deontic modal logic, the concept of permission is implied by the concept of obligation instead of being contradicted by it, and in alethic modal logic the concept of possibility is implied by the concept of necessity instead of being contradicted by it ([2]). It would therefore seem a more natural procedure to set up a correspondence between duties and privileges in such a way that the privilege corresponding to a given duty is implied by it rather than contradicted by it. Of course Hohfeld is correct in saying that *some* privilege does contradict each duty, but the privilege that does so must involve an added factor of negation in its internal content.

This objection to Hohfeld's treatment of the concept of privilege can be summarized by saying where he uses the term «privilege» as the contradictory of «duty» he really should be using the term «privilege-not», since the contradictory of the duty to pay a dollar is a privilege *not* to pay a dollar. «Privilege-not» might also be called «exemption», so that the contradictory of the duty

([2]) Aristotle sometimes relates possibility to necessity in the same way that Hohfeld relates privilege to duty. See K. J. J. HINTIKKA, "Aristotle's different possibilities," *Inquiry,* vol. 3 (1960), pp. 18-28.

to pay a dollar could be said to be the exemption from paying a dollar. The term «no-duty» could also serve as a synonym for «privilege-not», and it clearly bears the same relation to the term «duty» that the term «no-right» bears to the term «right».

Just as we can form the term «privilege-not» from the term «privilege», so also we can form the term «duty-not» from the term «duty». A «duty-not» could also be called a «prohibition», since a duty not to injure someone is also a prohibition against injuring that person.

The four concepts of *duty, privilege, prohibition* and *exemption* can be seen to be related in a square of opposition very much like the square of opposition of the *A-, I-, E-* and *O*-propositions of traditional logic:

	Subalterns	Subalterns
Contraries	Duty (*A*)	Prohibition (*E*)
Subcontraries	Privilege (*I*)	Exemption (*O*)

The contradictories are diagonally opposite each other in the above square. Just as the *A-* and *E*-propositions imply their respective subalterns, the *I-* and *O*-propositions, so also duty and prohibition imply their respective subalterns, privilege and exemption. Just as the contraries *A* and *E* cannot both be true so also duty and prohibition cannot both relate the same persons in the same respect. Just as the subcontraries *I* and *O* cannot both be false, so also privilege and exemption cannot both fail to relate the same persons in the same respect. Thus, for example, it cannot be the case that *X* fails to have the privilege walking on *Y*'s grass and also fails to have an exemption from walking on *Y*'s grass.

We can also form another similar square of opposition that deals with the respective converses (or correlatives, as Hohfeld would call them) of duty, prohibition, privilege and exemption. It is easy to verify that just as *right* is the converse of *duty,* so also *right-not* is the converse of *duty-not,* that is, of *prohibition,* while *no-right-not* is the converse of privilege, and *no-right* is the converse of *exemption.* For example, if *X* has the *privilege* toward *Y* of walking on *Y*'s grass, then *Y* has no right that *X* should *not* walk on his grass. The square of opposition for the converse concepts is as follows:

	Subalterns	Subalterns
Contraries	Right (A)	Right-not (E)
Subcontraries	No-right-not (I)	No-right (O)

As before, contradictories are diagonally opposite each other in the square, and the letters A, I, E and O are included to indicate the close analogy to the square of opposition of traditional logic. The term «no-right», introduced by Hohfeld, and the terms «right-not» and «no-right-not», introduced here, are unpleasantly artificial. This is because, in the case of these three converse relations, natural language provides no ordinary words to serve the purpose but rather relies on the use of the passive voice to handle the notion of converse.

The analogy with the square of opposition of traditional logic can be further reinforced by utilizing a device of Kripke ([3]) (and others) to write the four propositions, «X has a duty to do F to Y», «X has a privilege to do F to Y», «X has a prohibition against doing F to Y», and «X has an exemption from doing F to Y», respectively in the form of A-, I-, E- and O-propositions of traditional logic. This is done by assuming that in addition to the actual universe or world there are various «legally possible» worlds in which nothing illegal is the case. To say that something is legally necessary is then taken to mean that it is in fact true in all legally possible worlds, and to say that something is legally possible is to say that it is true in at least one legally possible world. The proposition that asserts that X has a duty to do F to Y can then be expressed as the following A-proposition: «All legally possible worlds are such that X does F to Y in each of these worlds». Similarly the proposition that asserts that X has a privilege to do F to Y can be expressed as the following I-proposition: «Some legally possible world is such that X does F to Y in that world». Similarly for prohibition and exemption and the corresponding E- and O-propositions. A similar treatment can of course also be applied to the four converse relations of right, no-right-not, right-not, and no-right. The same method that is used

([3]) Saul A. KRIPKE, "A completeness theorem in modal logic", *Journal of Symbolic Logic*, vol. 24 (1959), pp. 1-14.

here to handle legal concepts can be used to handle the corresponding ethical concepts.

A more elaborate formalism will now be sketched in outline. The symbol «*C*» for causation and the symbol «*S*» for «strives to realize», are taken as undefined, and various standard logical symbols are employed, including the symbol «*O*» for obligation, as in deontic logic (¹). The letters «*x*» and «*y*» refer to persons. This formalism handles not only the concepts already discussed, but also Hohfeld's concepts of *power, disability, liability* and *immunity*. A series of definitions will be interspersed with a series of interpretations. In the case of interpretations, equivalent formal interpretable sentences will be bracketed together, and equivalent informal interpretive sentences will also be bracketed together.

$f(a)$ $\left\{ \begin{array}{l} a \text{ has attribute } f. \\ a \text{ is a member of (class) } f \end{array} \right.$

Def. 1. $[a \ r \ b] \ = \ r(a,b).$

Def. 2. $r(a,)(b) \ = \ r(a,b).$

Def. 3. $r(,b)(a) \ = \ r(a,b).$

$r(a,b)$
$[a \ r \ b]$
$r(a,)(b)$
$r(,b)(a)$

$\left. \begin{array}{l} \\ \\ \\ \\ \end{array} \right\} \left\{ \begin{array}{l} a \text{ bears } r \text{ to } b. \\ b \text{ has attribute } r(a,) \text{ of being borne } r \\ \qquad \text{by } a. \\ a \text{ has attribute } r(,b) \text{ of bearing } r \text{ to } b. \end{array} \right.$

Def. 4.
$s(,b,c)(a) \ = \ s(a,b,c).$
$s(a,,c)(b) \ = \qquad$ "
$s(a,b,)(c) \ = \qquad$ "
$s(,,c)(a,b) \ = \qquad$ "
$s(a,,)(b,c) \ = \qquad$ "
$s(,b,)(a,c) \ = \qquad$ "

By definitions 1 and 4 it is seen that
«$[a \ s(,b,) \ c]$» is an abbreviation for «$s(,b,)(a,c)$» and hence for «$s(a,b,c)$».

$S(x,p)$
$[x \ S \ p]$

$\left. \begin{array}{l} \\ \\ \end{array} \right\} \left\{ \begin{array}{l} x \text{ strives for } p. \\ x \text{ strives to make } p \text{ true.} \end{array} \right.$

$C(p,q)$ $\Big\}$ $\Big\{$ p (partially) causes q ([5]).
$[p\ C\ q]$ p is a (partial) cause of q.

Def. 5. $cando(x,p) = (\exists q)[[x\ S\ [p\ \&\ q]]\ C\ p]$.

$cando(x,p)$ $\Big\}$ $\Big\{$ x can do p.
$[x\ cando\ p]$ x has the power to do p.

Def. 6. $does(x,p) = (\exists q)[[x\ S\ [p\ \&\ q]]\ \&\ [[x\ S\ [p\ \&\ q]]\ C\ p]]$.

$does(x,p)$ $\Big\}$ $\Big\{$ x does p.
$[x\ does\ p]$

Def. 7. $does(x,f,y) = does(x,f(y))$.

$does\ (x,f,y)$
$does(,f,)(x,y)$ $\Big\}$ $\Big\{$ x does f to y.
$[x\ does(,f,)\ y]$ x makes y have attribute f.

Def. 8. $duty(x,p) = O[x\ does\ p]$.

$duty(x,p)$ It ought to be the case that x does p.
$[x\ duty\ p]$ $\Big\}$ $\Big\{$ x ought to do p.
$duty(,p)(x)$ x has a duty to do p.

Def. 9. $duty(x,f,y,) = [x\ duty\ f(y)]$.

Def. 10. $right(y,f,x) = [x\ duty\ f(y)]$.

$duty(x,f,y)$ x ought to do f to y.
$[x\ duty(,f,)\ y]$ $\Big\}$ $\Big\{$ x has a duty-to-do-f toward y.
$right(y,f,x)$ y ought to be done f by x.
$[y\ right(,f,)\ x]$ y has a right-to-be-done-f toward x.

Def. 11. $privilege(x,p) = \sim O \sim [x\ does\ p]$.

$privilege(x,p)$ $\Big\}$ $\Big\{$ x may do p.
$[x\ privilege\ p]$. x has a privilege to do p.

Def. 12. $privilege(x,f,y) = \sim O \sim [x\ does\ f(y)]$.

Def. 13. $no\text{-}right\text{-}not(y,\ f,\ x) = \sim O \sim [x\ does\ f(y)]$.

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[5] Some properties of partial causation are described in my paper, "A logical analysis of some value concepts", *Journal of Symbolic Logic*, vol. 28 (1963), pp. 135-142. In another paper I plan to give a definition of partial causation in terms of some other concepts.

privilege(x,f,y)
[x privilege(,f,) y]
no-right-not(y,f,x)
[y no-right-not(,f,) x]

$\left.\begin{array}{l} \end{array}\right\}$ $\left\{\begin{array}{l} \end{array}\right.$

x may do f to y.
x has a privilege-to-do-f toward y.
y may be done f by x.
y has a no-right-not-to-be-done-f
    toward x.

Def. 14. prohibition(x,p) $= O \sim [x$ does $p]$

prohibition(x,p)
[x prohibition p]

$\left.\begin{array}{l} \end{array}\right\}$ $\left\{\begin{array}{l} \end{array}\right.$

x must not do p.
x is prohibited from doing p.

Def. 15. prohibition(x,f,y) $= O \sim [x$ does $f(y)]$.

Def. 16. right-not(y,f,x) $= O \sim [x$ does $f(y)]$.

prohibition(x,f,y)
[x prohibition(,f,) y]
right-not(y,f,x)
[y right-not(,f,) x]

$\left.\begin{array}{l} \end{array}\right\}$ $\left\{\begin{array}{l} \end{array}\right.$

x must not do f to y.
x has a prohibition-against-doing-f
    toward y.
y must not be done f by x.
y has a right-not-to-be-done-f
    toward x.

Def. 17. exemption(x,p) $= \sim O [x$ does $p]$.

exemption(x,p)
[x exemption p]

$\left.\begin{array}{l} \end{array}\right\}$ $\left\{\begin{array}{l} \end{array}\right.$

x need not do p.
x has an exemption from doing p.

Def. 18. exemption(x,f,y) $= \sim O [x$ does $f(y)]$.

Def. 19. no-right(y,f,x) $= \sim O [x$ does $f(y)]$.

exemption(x,f,y)
[x exemption(,f,) y]
no-right(y,f,x)
[y no-right(,f,) x]

$\left.\begin{array}{l} \end{array}\right\}$ $\left\{\begin{array}{l} \end{array}\right.$

x need not do f to y.
x has an exemption-from-doing-f
    toward y.
y need not be done f by x.
y has a no-right-to-be-done-f
    toward x.

Def. 20. power(x,f,y) $= [x$ cando $f(y)]$.

Def. 21. liability(y,f,x) $= [x$ cando $f(y)]$.

power(x,f,y)
[x power(,f,) y]
liability(y,f,x)
[y liability(,f,) x]

$\left.\begin{array}{l} \end{array}\right\}$ $\left\{\begin{array}{l} \end{array}\right.$

x can do f to y.
x has a power-to-do-f toward y.
y can be done f by x.
y has a liability-to-be-done-f
    toward x.

Def. 22. disability(x,p) = ~$[x$ cando $f(y)]$.

disability(x,p) ⎱ ⎰ x cannot do p.
[x disability p] ⎰ ⎱ x has a disability to do p.

Def. 23. disability(x,f,y) = ~$[x$ cando $f(y)]$.

Def. 24. immunity(y,f,x) = ~$[x$ cando $f(y)]$.

disability(x,f,y) x cannot do f to y.
[x disability$(,f,) y$] x has a disability-to-do-f toward y.
immunity(y,f,x) y cannot be done f by x.
[y immunity$(,f,) x$] y has an immunity-from-being-done-f toward x.

Suppose, as an example, that x has contracted to build a house for y for $25,000. Then, by the act of building the house, x can impose on y the obligation to pay x $25,000. Thus x has a power over y to make y have a duty to x. Let "g" be interpreted in such a way that "does(y,g,x)" will mean that y pays x $25,000. Then "[$y$ duty$(,g,) x$]" would mean that y has a duty toward x to pay x $25,000, and "duty$(,g,x)$" would designate the attribute of owing $25,000 to x. The fact that x is able to impose this attribute on y, that is, the fact that x can make y owe him $25,000, can be expressed by asserting that x has the power over y that is expressed by the following formula: power$(,$duty$(,g,x),)$; that is, it can be expressed by the formal sentence: [x power$(,$duty$(,g,x),)$ y]. Similarly x might have a power over y to confer on y some power toward z, or to confer on y some immunity toward w, and so on. Also there can be duties to confer powers, rights to be conferred immunities, and so on.

The legal structure of society is largely compounded of legal relations of these sorts, and the ethical structure of society is largely compounded of similar ethical relations.

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