# Desuetudo: A Game-Theoretic Approach

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I suggest an account of *desuetudo* in game-theoretic terms. I argue that there is an asymmetry with *consuetudo*, because *consuetudo* cannot be fully captured by a game-theoretic analysis, while *desuetudo*, properly understood as a dynamic, diachronic process, can. A norm (not necessarily a *consuetudo*) ceases to exist because there's no need anymore, in an interactive situation, to foster certain equilibria, even though the same norm which is going in *desuetudo* might not have emerged as a *consuetudo*. While this kind of norm dynamics cannot explain all kinds of *consuetudines*, it can explain *desuetudo*, understood as a dynamic process ending with normative indifference, from a state which was normatively relevant. In this game-theoretic account the dynamicity is captured by the repeated occurence of the game, while *desuetudo* is the opposite process, in terms of normativity, with which a norm emerges (regardless of the fact whether the initial norm was a *consuetudo* or posited etc.).

Keywords consuetudo; desuetudo; game theory; equilibria.

### 1 Consuetudo *vs* Desuetudo

In France, until 2013, women needed to have the permission of local police if they wanted to wear trousers, according to a law passed in 1799. In England, during the Middle Ages, when a person was murdered, anyone close to the victim could bring an Appeal of Death against the party accused of the murder. The two parties would fight with

clubs starting at dawn: if the accused prevailed or resisted until sunset, they would be considered innocent, guilty otherwise. In 1818, Richard Rush (a United States diplomat stationed in England) reported that a court of law declared that this ancient custom was still in force.

It is widely believed that there is *consuetudo*<sup>1</sup> when two conditions are fulfilled: *diuturnitas* and *opinio iuris ac necessitatis*.<sup>2</sup> I will take this as a starting point. But given such an understanding of *consuetudo*, what is the right understanding of *desuetudo*? This is a hard matter to decide without employing a background theory. As a starting point, however, without assuming any substantial theory, we can already isolate three notions of *desuetudo*, just by negating one, the other, or both conditions in the definition of *consuetudo*.<sup>3</sup>

- *desuetudo-*1: a state of affairs which is formally (considered to be) a norm has fallen in disuse (but may still be perceived by people as normative). In other terms: no *diuturnitas*, but possibly *opinio iuris ac necessitatis*;
- *desuetudo-2*: a state of affairs which is formally (considered to be) a norm is not perceived anymore by people as normative. In other terms: no *opinio iuris ac necessitatis*, but possibly *diuturnitas*;
- *desuetudo-*3: a state of affairs which is formally (considered to be) a norm has fallen in disuse and is not perceived anymore by people as normative. In other terms: no *diuturnitas*, no *opinio iuris ac necessitatis*.

At this point one's background theory can make more accurate statements about which kind of *desuetudo*, if any, will play a role, one may think. But it is not so easy:

<sup>&</sup>lt;sup>1</sup>A terminological point: throughout this paper I will use *consuetudo* to refer to those phenomena grouped under various terms like 'custom', 'custom law', 'consuetudinary law', 'use' and *desuetudo* to refer to those phenomena usually grouped under the terms 'disuse', 'desuetude', etc. The main motivation behind this choice is theoretical neutrality.

<sup>&</sup>lt;sup>2</sup>Paolo Grossi, the former president of the Italian Constitutional Court, wrote that (a young) Norberto Bobbio (in Bobbio, 2010) argued against the *opinio iuris* as a defining element of *consuetudo*, considering it just a consequence of the fact that a *consuetudo* has been established (see Bobbio, 2010, in the Preface). Bobbio's point is way subtler: Bobbio argues (well, sort of) that the *opinio iuris*, and more generally an intentional element, is absent only in the emergence or formation of the *consuetudo* itself, not in its continuous existence or observance. However, even this latter thesis seems hardly tenable. While arguing against Bobbio is behind the scope of the present essay, let me just note that Bobbio seems to have in mind an unrealistic punctual formation process of a *consuetudo*: a process that culminates and resolves in the punctual existence of a norm. Once one gets rid of this unargued for, implicit premise, Bobbio's arguments against *opinio iuris* stop working altogether.

<sup>&</sup>lt;sup>3</sup>Such an account is obviously preliminary, for there can be *desuetudo* not only of customs, but of e.g. statutory provisions as well. A more general account of *desuetudo* will follow.

negation of normative contexts is indeed quite tricky (cf e.g. the Frege-Geach debate). For instance, take a social custom: removing one's hat when inside a building (for a man). Now, under which conditions can we say that there is *desuetudo*? According to the analysis above, either when not every male removes his hat when inside a building, or when this is not perceived as binding, or both. Two problems to note: first, it is unclear whether some exceptions will be enough to defeat the regularity (in fact, there are definitely violators of laws and statutes as well, and this is not enough to challenge its normative status at all); second, it is not clear what is required for the absence of *opinio iuris ac necessitatis*: do we need *opinio iuris ac necessitatis* of the opposite way of conduct (e.g. in this case that it is obligatory to keep one's hat on) or that the opposite way of conduct is permitted, or facultative (i.e. both keeping one's hat on and remove it are permitted) or there is just no *opinio iuris ac necessitatis* any more (i.e. to the effect that it is now completely indifferent what one does with regard to one's hat when inside a building)?

I would therefore like to distinguish at least two understanding of *desuetudo* that seem theoretically more significant in reference with the presence or absence of a normative element (i.e. *opinio iuris ac necessitatis*), rather than the content of this normative element.

- In the first case, the normative element is present (and it could be that the opposite conduct is obligatory, or only permitted, or now considered facultative).<sup>4</sup>
- In the second case, the normative element is absent, i.e. the conduct (or its opposite, obviously) is *now* a matter of normative indifference.<sup>5</sup> However, the normative element was there in the past: that of *desuetudo* is a dynamic process. Consider in fact just a regularity of behavior, with no normative element. If the normative element wasn't there before, this wouldn't be a case of *desuetudo*, because there wasn't a *consuetudo* (or anything of normative significance, like a norm-influenced behavior or a norm established by any other method) in the first place.

One source of confusion between indifference and optionality is the (often implicit) closure principles in some (sub)systems of statutory law, according to which whatever is not forbidden, is permitted. But there isn't an automatic equivalent for customs,

<sup>&</sup>lt;sup>4</sup>Note that by facultative I mean 'optional', i.e. permissible *and* omissible or, in other words, not obligatory *and* permissible.

<sup>&</sup>lt;sup>5</sup>Note the difference between indifferent and optional (or facultative). One way this distinction may matter a great deal is with supererogation: only optional actions can be supererogatory, but indifferent actions can not, and supererogatory actions cannot be indifferent.

where the positive presence (or lack thereof) of the normative element is essential and cannot just be assumed for any regularity in behavior.<sup>6</sup>

It is therefore only in the latter case that we can speak of *desuetudo* as a *sui generis* category, i.e. something more than just a *consuetudo* with a different scope.

### 2 Games and Norms

*Consuetudo* requires (strategic) interaction in a group of agents. *Desuetudo*, similarly, even when it is *desuetudo* of a statutory norm, cannot be a phenomenon at the individual level: it would otherwise be a transgression or an exception, rather than *desuetudo*. Strategic interactions are studied with different approaches by different disciplines, but game theory is particularly relevant from our vantage point. There is in fact a well-established tradition of explaining conventions game-theoretically. In this section we very briefly introduce some concepts that are useful in order to investigate the interplay between norms and *consuetudines*.

For the purposes of this paper, by 'game' we very roughly mean a situation of strategic interaction among agents (n > 1) that can be reasonably modeled by game theory. Thus a game is a situation where agents can act in such a way to maximize their utility, taking into account the actions of other agents. A strategy for a player is a roadmap of responses that that player can take in response to the strategies of all other players. A *solution* of a game is a subset of some mathematical descriptions as to how the players might behave in the game. Obviously, we want a solution to include all the ways rational players would behave, and to exclude all the ways in which rational players would not behave (cf. e.g. Myerson, 1997, p. 107).

Nash equilibria are a solution.<sup>7</sup> Informally, a Nash equilibrium is a strategy profile

<sup>&</sup>lt;sup>6</sup>A terminological point. My use of 'normative element' is meant to be neutral between different theories of law and normativity, e.g. (legal) positivism, naturalism, or realism. Presumabily a legal positivist will understand 'normative element' as some sort of validity or other, a legal realist as a some sort of effectiveness, etc. According to Bobbio, for one, in *consuetudo* validity and efficacy coincide (see Bobbio, 2010, p. 48), given that *consuetudo* is a "normative fact". A *desuetudo* will be 'lack of conservation' of a *consuetudo*, thus becoming an ineffective (former?) consuetudinary norm (p. 61). Of course there is some conceptual space for a (legal) positivist to deny that *desuetudo* is a (legally) significant phenomenon at all. However, this is not a conceptual truth, but it depends on how positivism is understood. For instance, the important contemporary legal theorist and philosopher of law Leslie Green writes that legal positivism can be understood as the "thesis that the existence and content of law depends on social facts [...] [w]hat laws are in force in that system depends on what social standards its officials recognize as authoritative; for example, legislative enactments, judicial decisions, or social customs (Green, 2018)."

<sup>&</sup>lt;sup>7</sup>See Nash, 1950.

Table 1: Driving game				
(Player 1, Player 2)	Drive on the right	Drive on the left		
Drive on the right	(10, 10)	(0, 0)		
Drive on the left	(0, 0)	(10, 10)		

Table 2: One-shot prisoner dilemma, payoffs = years in prison (lower is better)

	Confess	Doesn't confess
Confess	(6,6)	(0,7)
Doesn't confess	(7,0)	(1, 1)

such that no player can do better if they unilaterally change their strategy. An example of a simple game with Nash equilibria is the one in table 1. In this case there are two Nash equilibria: when both parties drive on the right, or on the left.<sup>8</sup>

Sometimes Nash equilibria can appear to be not very efficient, at least from a thirdparty perspective, for instance in the famous prisoner's dilemma of table (2), where the payoffs are years in prison.

This is the case because not all Nash equilibria are Pareto-optimal. Informally, Pareto optimality tracks the situation where there can be no change that improve someone's stance without at the same time making someone else worse off.

As we have seen, there are games with multiple equilibria. What might cause players to expect each other to converge on one, rather than another, equilibrium? Very famously, Schelling asked people from Connecticut to meet the following day in New York City incommunicado. At a higher than chance rate, most managed to meet at 12 in Grand Central. Schelling, 1960 argued that anything that makes the players focus on one particular focal equilibrium may make all players expect it and then chose it, in a sort of self-fulfilling prophecy: "[a] *focal equilibrium* is an equilibrium that has some property that conspicuously distinguishes it from all the other equilibria (Myerson, 1997, p. 108)."

The focal equilibrium can be determined by traditions, by a focal arbitrator who is impartial and communicates to the players, by the features of the utility payoffs them-

<sup>&</sup>lt;sup>8</sup>The driving game is a simple example of a coordination game: "[a] coordination game occurs whenever the utility of two or more players is maximized by their doing the same thing as one another, and where such correspondence is more important to them than whatever it is, in particular, that they both do (Ross, 2019)."

selves, or by the properties of the strategies.

For instance, in deciding where to drive, as in the game represented in table I, driving on the left can be singled out because of the tradition of horse-carts to keep left. But such an analysis is not limited to single acts or practices. Focal points find wider application. There is in fact a long-standing tradition to consider institutions (and rules) to be equilibria in strategic games, cf. Bicchieri, 2006; Lewis, 1969 among others.<sup>9</sup>

According to this tradition, the consensus is that "cultural norms can be defined to be the rules that a society uses to determine focal equilibria in game situations (Myerson, 1997, p. 113)"

We have thus reached "social norms". Social norms are, for Bicchieri, behavioural rules R, of the form 'do X in situations of type S'. But not all behavioural rules are social norms. They should obey two "conditions": the belief condition and the conditional preference condition. Behavioural rules become social norms when a sufficiently large proportion of individuals i in a population P(I) believe that R applies, and (2) prefer to conform to R on the condition that each i believes that a sufficiently large proportion of other members of P(a) conform to R and (b) expect i to conform (Bicchieri, 2006, p. II).

The rule of *omertà*, for instance, can be seen at play in the modification of the prisoner's dilemma of table 3, where the payoffs now represent the disutility in case of violating *omertà*. In particular *omertà* strengthens the payoffs for not confessing, by diminishing the utility of confessing. It can be seen that now the only rational solution is for both parties not to confess.<sup>10</sup> However, one can definitely see how the rule of omertà can be explained not simply as a rule imposed externally, as it were, from the game, but as a norm emerging *from within* the game to ensure that there is only one viable strategy, and that strategy minimizes disutility for all parties involved.<sup>11</sup>

<sup>&</sup>lt;sup>9</sup>Although it is clearly not the only thesis available in the literature. Others maintain that institutions are rules, while others hold a mixed-theory, see e.g. Hindriks and Guala, 2015.

<sup>&</sup>lt;sup>10</sup>Since there is a slight abuse of notation for simplicity of presentation, I spell out that the numbers in black report the old payoffs, i.e. number of years in prison. The red numbers are the payoff of the oneshot prisoner dilemma with *omertà*, where numbers without <sup>(\*\*)</sup> are still years in prison, but numbers with <sup>(\*\*)</sup> express general disutility that might include, but is not limited to, years in prison, and definitely includes extra-judicial consequences for violation of the omertà rule.

<sup>&</sup>lt;sup>11</sup>There is an important complication we should mention at this point: repeated games. If the prisoner dilemma weren't one-shot, but repeated, players will end-up coordinating on non-confessing, given that *the number of repetition is indeterminate*, without the need for a norm like omertà. If it weren't indeterminate, then the last round would just be equivalent to the usual one-shot version. In general, however, in real-life situations (which can be reproduced in controlled, experimental settings) what we have are at most sequence of one-shot prisoner dilemmas, rather than repeated prisoner dilemmas, because the opponents change. The emergence of a rule like omertà is therefore not compromised by this

	Confess	Doesn't confess
Confess Doesn't confess	$(6, 6) \rightarrow (6^*, 6^*)$ $(7, 0) \rightarrow (7, 7^*)$	

Table 3: One-shot prisoner dilemma with *omerta*, payoffs: n = years in prison;  $n^* =$  disutility; (lower is better)

A similar point can be made by using the more complex tools of evolutionary game theory, which I only sketch here. In evolutionary game theory, strategies are not explicit, deliberate choices, but agents are hard-wired with strategies, and the success for a strategy is determined by how many copies of itself there are left in future generations, given an initial population where different strategies are distributed with certain frequencies. In a sense, the strategies are the players — agents instead are mere carriers or executors.<sup>12</sup> In dynamic prisoner's dilemmas where the interaction is random, defecting (i.e. confessing) is better than the population average as long as there is some non-confessing going on. However, a modicum of correlation, i.e. that non-confessing people are slightly more likely than random to meet other non-confessing, even when confessing people are slightly more likely than random to meet other confessing, even when confessing people are slightly more likely than random to meet other confessing people. The emergence of a norm such as omertà ensures this condition.

### 3 Convention vs *Consuetudo*

Given that a convention is a social (coordination) problem that is solved by coordinating without explicitly agreeing on doing so (i.e. by coordinating and expecting others to coordinate as well), one might ask if extant accounts of conventions cannot be extended to customs and *consuetudines*. Quite famously Lewis, 1969 maintained that conventions are coordination equilibria in non-cooperative games, satisfying a criterion of common knowledge of mutual expectations. Conventions come into force thanks to *salience*, i.e. when a particular equilibrium is conspicuous to all players for some reason.<sup>13</sup> If people who cannot communicate are asked to pick one number among the

complication.

<sup>&</sup>lt;sup>12</sup>Skyrms, 1996 is a classic application of evolutionary game theory to social phenomena.

<sup>&</sup>lt;sup>13</sup>According to Lewis, a convention is a behavioural regularity (R) in a recurrent situation such that (I) there is a history of conformity with R, (2) there are mutual expectations of conformity, (3) everyone prefers to conform with R, if (almost) everybody else does the same, and (4) everyone would prefer to conform with an alternative regularity R', if everybody else did the same and (5) there is common knowl-

following ten:

### 0, 1, 2, 3, 4, 5, 6, 7, 8, 9

getting a reward if they manage to pick the same one, there's a surprising coordination on o. Technically, there's only a small chance to select the same number, and all numbers should have the same chance to be picked out; yet o has several "salient" properties: it is a very peculiar number, it is the leftmost, etc.<sup>14</sup>

Conventions, at least as defined and understood in the game-theoretic and decisiontheoretic literature, to the extent that they are norms, seem to be a subset of *practical* norms, i.e. those norms codifying the necessary means an agent should take to reach their objectives or maximize their interest.<sup>15</sup> On the other hand, not all conventions are (social or practical) norms:<sup>16</sup> if conventions massively stopped being followed, they would just stop to exist, contrary to norms. *Consuetudines*, on the other hand, cannot coincide with social or practical norms. They cannot coincide with practical norms because sometimes following them goes against the agent's self-interest, whereas an equilibrium in a game is reached if there is some optimality involved.<sup>17</sup> *Consuetudines* cannot coincide with the game-theoretic understanding of conventions either, because at least some of them do not seem to solve social problems in a coordinated ways. Even if probably outside of the legal domain, dietary customs (i.e. not drinking cappuccino

edge of (I)-(4).

<sup>&</sup>lt;sup>14</sup>Lewis never formalized salience, but Vanderschraaf, 1995 tries to add it to his theory of conventions as correlated equilibria satisfying a public intentions criterion (PIC: At a convention, each agent will desire that his choice of strategy is common knowledge among all agents engaged in the game (p.71)). Saliency is defined as a space of "states of the world", and a convention is defined as a function from saliency (i.e. from a space of "states of the world") to strategy combinations of a noncooperative game which meet the PIC.

<sup>&</sup>lt;sup>15</sup>Lewis (Lewis, 1969, pp. 97ff.) indeed maintains that conventions are a species of norms, i.e. "regularities to which we believe one ought to conform (p. 97)". And again "[a]ny convention is, by definition, a norm (p.99)". However, "not all so-called rules are conventions (p. 100)".

<sup>&</sup>lt;sup>16</sup>The literature on the relationship between conventions and norm is quite extended. See Southwood and Eriksson, 2011 for a recap and arguments that norms and conventions cannot be assimilated.

<sup>&</sup>lt;sup>17</sup>The point I am making here is importantly different from the famous Gilbert's (Gilbert, 1989) critique of Lewis: roughly, conventions cannot be explained by game-theoretic means as we know them, because while game-theory is essentially individualistic, conventions are an essential social phenomenon. Recently, however, Stirling, 2012 developed *conditional* game theory, where agent's utility may be conditional on others' preferences, without the group utility being either reduced to the aggregation of individual utilities or imposed *ex novo*. He distinguishes, among other, between conditional utility, concordant utility and conditional concordant utility, which can be recursively applied to agents, groups, groups of groups. On extensions of game-theory beyond individual preferences, see also Bacharach, 2006, among others.

after 11am) seem to have both the objective (regularity in behavior) and the subjective (perceived as binding) requirements to qualify as *consuetudines*, but are clearly not coordination strategies to solve social problems.

Is it possible to recover a game-theoretic analysis of *consuetudo*? Some *consuetudines* indeed seem to have elements in common with conventions or social norms, but a general game-theoretic analysis is to be ruled out. But a game-theoretic approach can, I argue, explain or at least give an account of *desuetudo*.

### 4 A Game-Theoretic Account of *Desuetudo*

Rather than just a *consuetudo* with an opposite scope, we identified *desuetudo* with the case where the normative element is absent, i.e. the conduct (or its opposite, obviously) is *now* a matter of normative indifference. First, given this understanding it is clear that *desuetudo* does not require a previous *consuetudo*: there is *desuetudo* whenever there is a change in the normative element, but this normative element need not be *opinio iuris ac necessitatis*, but it could be the normative element of a statutory provision. And indeed one can very well talk of disuse of posited laws, if one's background so allows.<sup>18</sup>

This still leaves open the question of whether, given the subsequent absence of the previous normative element, a regularity of behavior is still required in order to have *desuetudo*. But the change of the previous normative status to normative indifference needs to be widespread, almost universal — otherwise we would just talk of non-compliancy.

In the case of the prisoner's dilemma we have seen that norms that change the payoff can emerge, in repeated games, in order to have people converge on one particular equilibrium. These norms and their change to payoffs are not intrinsic to the structure of the game (or, more generally, to the coordination problem at hand). Similar explanations are given for conventions, where one looks for elements not intrinsic to the structure of the game (saliency, focal or Schelling points, etc.) to explain why one particular equilibrium is in the first place chosen and then followed and enforced.

I suggest that *desuetudo* can be explained with the same strategy. A norm (like omertà) emerges in an interactive situation to foster certain equilibria. A norm (not necessarily a *consuetudo*) ceases to exist because there's no need anymore, in an interactive situation, to foster certain equilibria, even though the same norm which is going in *desuetudo* might not have emerged as a *consuetudo*. While this kind of norm dynamics

<sup>&</sup>lt;sup>18</sup>The Italian civil code (art. 143bis) for instance prescribes that "La moglie aggiunge al proprio cognome quello del marito", which to my knowledge is never enforced, thus being a clear case of *desuetudo* of a statutory provision, as long as it is interpreted as being prescriptive, rather than permissive.

cannot explain all kinds of *consuetudines*, it can explain *desuetudo*, understood in the proper sense. In fact, we independently characterized *desuetudo* as a dynamic process ending with normative indifference, from a state which was normatively relevant. In this game-theoretic account the dynamicity is captured by the repeated occurrence of the game, while *desuetudo* is the opposite process, in terms of normativity, with which a norm like omertà emerges (regardless of the fact whether the initial norm was a *consuetudo* or posited etc.).

Tables (4)–(6) illustrate this dynamic account of *desuetudo*. Table (4) presents the "state of nature": coordination is desirable but there isn't anything, inside the strategic interaction itself, that points either to wearing a hat inside or not wearing a hat inside. A norm, either internally as a *consuetudo* or as externally imposed, emerges to force one equilibrium: not wearing a hat inside (table (5)). Coordination not to wear a hat is thus encouraged, coordination to wear a hat is instead discouraged. Finally table (6) represents the effect of *desuetudo*: cancelling out the payoff (in red) to get to a situation of pure indifference (final result of the process, in blue). Note that it is immaterial for this account of *desuetudo* whether the norm that has fallen in disuse came about as a *consuetudo* or as a posited norm.

There are at least two major immediate doubts or objections to this account: first, it is unclear whether it is exhaustive, i.e. whether it covers all cases of *desuetudo*; and second, it is unclear whether it is really explanatory. With regard to the *first* consideration, it seems that such an account is exhaustive (modulo the limitations due to the abstraction process and the usual limitations of game-theoretic approaches): *desuetudo* is clearly a collective phenomenon (otherwise we would talk of violation of a given norm without hesitation), and therefore suited to be approached game-theoretically. Moreover, since this account does not require a fine-grained discrimination between different notions of solutions, it is immaterial whether the interactive situation is cooperative or non-cooperative. With regard to the *second* consideration, the game-theoretic account I put forward clearly does not explain why *desuetudo* happens, but it explains *how* it happens. Presumably a full explanation why *desuetudo* happens will be extremely complex, involving different disciplines.

There is an issue that has been ignored so far, and it's an issue that has a long history in the philosophy of law: whether "social", descriptive facts (effectiveness, ineffectiveness) can have "normative" consequences (such has making a norm ceasing to be valid, or exist, etc.). Applied to our topic, the question is whether *desuetudo* is to be understood as a descriptive or as a normative process. If the former, someone like Kelsen, endorsing a particular streak of (legal) positivism, might object that if *desuetudo* is indeed a descriptive fact, than it is irrelevant for the normative character of the law. It is very well-known that such a position runs into regress problems, whose solution requires a

Table 4: Wearing a hat inside, pre-consuetudo			
	Wears a hat inside	Doesn't wear a hat inside	
Wears a hat inside	(10, 10)	(0, 0)	
Doesn't wear a hat inside	(0, 0)	(10, 10)	

	Wears a hat inside	Doesn't wear a hat inside
Wears a hat inside	(-1, -1)	(-5, 0)
Doesn't wear a hat inside	(0, -5)	(10, 10)

Table 5: (Not) Wearing a hat inside, *consuetudo* 

presuppositional point of view. Another strand of positivism on the other hand, such as Hart's, will be perfectly happy to recognize that customs or conventional facts (although not in the sense of Lewis) are at the basis of the normative system.

A final point of criticism is the use of game-theoretic devices to model cognitively complex beings. It is well-known that the less cognitively complex an agent is, such as an insect, the better its behavior can be compared to that of an "economical agent". More complex beings capable of refined learning, changing preferences, and complex internal deliberation processes are less apt to the satisfactorily captured by simple models. A certain degree of simplification and idealization, therefore, must hold for the present account as well.

#### Conclusion 5

While conventions seems to be explained reasonably well by a game-theoretic analysis, it has been shown that *consultudines* cannot be similarly explained. However, we gave a a game-theoretic analysis of *desuetudo*, understood as a dynamic process terminating in the absence of a normative element, and not just as a contrary *consultation*. It is impor-

Wears a hat inside Doesn't wear a hat inside Wears a hat inside (-1, -1)  $(1, 1) \rightarrow (0, 0)$ (-5,0)  $(5,0) \rightarrow (0,0)$ Doesn't wear a hat inside  $(0, -5) (0, 5) \rightarrow (0, 0)$  $(10, 10) (-10, -10) \rightarrow (0, 0)$ 

Table 6: Wearing a hat inside (or not), desuetudo

tant to note at this point that this account of *desuetudo* explains the agents' attitudes, or lack thereof, towards the normative status of a state of affairs, exactly as the traditional account of *consuetudo* deals with the *opinio iuris ac necessitatis*. It follows that under this account of *desuetudo*, there could be *desuetudo* of a statutory provision which is nonetheless still valid, if validity is understood e.g. à la Kelsen.

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