

legal consequences. In other words, competence has to do with what an actor can or cannot do.⁸ I return to juridical acts in section 9.

Deontic states of affairs have to do with the obligated, the forbidden and the permitted. Examples are that Meryl ought to pay Jane \$100, that smoking is prohibited in public buildings and that John is allowed to take a day off.⁹ Two basic categories of deontic states of affairs are usually distinguished: deontic states of affairs of the *ought-to-do* type and of the *ought-to-be* type. Examples of the first category are that car drivers ought to drive on the right hand side of the road, that public officers are prohibited to accept bribes and that John is permitted to walk in the park. Examples of the second category are that car drivers ought to be sober and that it is forbidden that high public officers are members of Parliament. Deontic states of affairs should be distinguished from the non-modal states of affairs on which they supervene. An example is the state of affairs that there is a contractual bond between two parties, which underlies the state of affairs that one party ought to pay the other.

Probabilistic states of affairs have to do with the probable, the certain and the uncertain. Examples of probabilistic states of affairs are that it will probably rain, that the train definitely will be late, and that Jane might pay her bill. Probabilistic states of affairs should be distinguished from anankastic states of affairs: the reasons why something is necessary are not those which make something probable or certain. The announcement that the train will be late makes it highly probable that the train will be late, but does not make it necessary, because the announcement has only impact on our beliefs about the train, not on the train itself.

4. EVENTS

Events cause changes in the total set of obtaining states of affairs. For instance, if it starts to rain, the state of affairs that it is raining starts to obtain. Other examples of events are

⁸ In the law, competence is sometimes assumed to be a state of affairs of the deontic modality. On that assumption, competence is considered to imply primarily the *permission* to perform an act in the law. However, it is better to consider the *capability* to perform the act as the primary modal state of affairs implied by competence. Since such capabilities are useless if their holders are not permitted to exercise them, the permissions to do what one is capable to do may be seen as the secondary modal state of affairs implied by competence.

⁹ Deontic states of affairs are discussed more extensively in chapter 6.

1. The starting of the European Economic and Monetary Union.
2. The apple's falling on the ground.
3. Jane's dying.
4. John taking away the car of Gerald.
5. The Supreme Court annulling the judgment of the Court of Justice.
6. An international treaty being ratified.
7. The transfer of the ownership of a house.

Notice that the *occurrence* of an event is itself a (momentary) state of affairs, for instance the state of affairs that John takes away Gerald's car.

A special kind of events are *acts*: events that consist of the intentional behavior of an individual (examples 4-7). A special category of acts are the so-called *juridical acts* (examples 5-7). Juridical acts are discussed in section 9.

4.1 The effects of an event

By an event, one or more states of affairs *State of affairs*₁ stop obtaining and other states of affairs *State of affairs*₂ start to obtain (cf. figure 1). For instance, if the event that it starts to rain occurs, the state of affairs that it is not raining stops obtaining and the state of affairs that it is raining starts to obtain.

I will use rectangular boxes to denote states of affairs, and rounded boxes to represent events. Arrows indicate the directed connection between states of affairs. If the state of affairs that stops to obtain by an event is trivial or irrelevant, it is not shown (cf. figure 3).

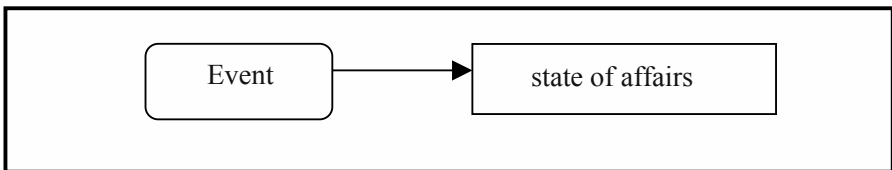


Figure 3: The initial state of affairs is sometimes not shown

Since the occurrence of an event is itself a state of affairs (it is a fact that it starts to rain), there is another way to depict the event of Figure 1:

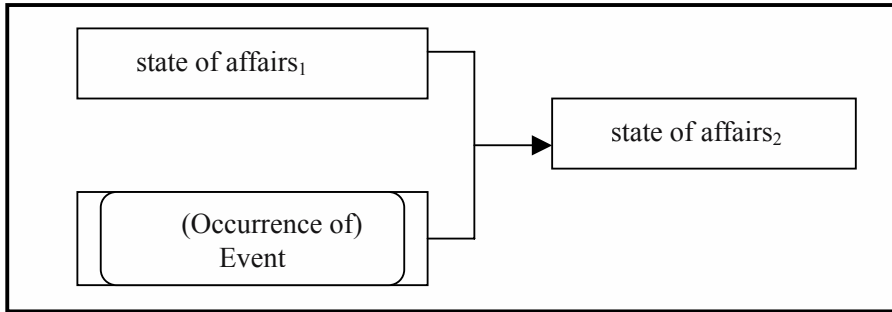


Figure 4: The occurrence of an event as a state of affairs.

To indicate that the occurrence of an event is a special state of affairs related to an event, it is shown as a rectangular box containing a rounded box.

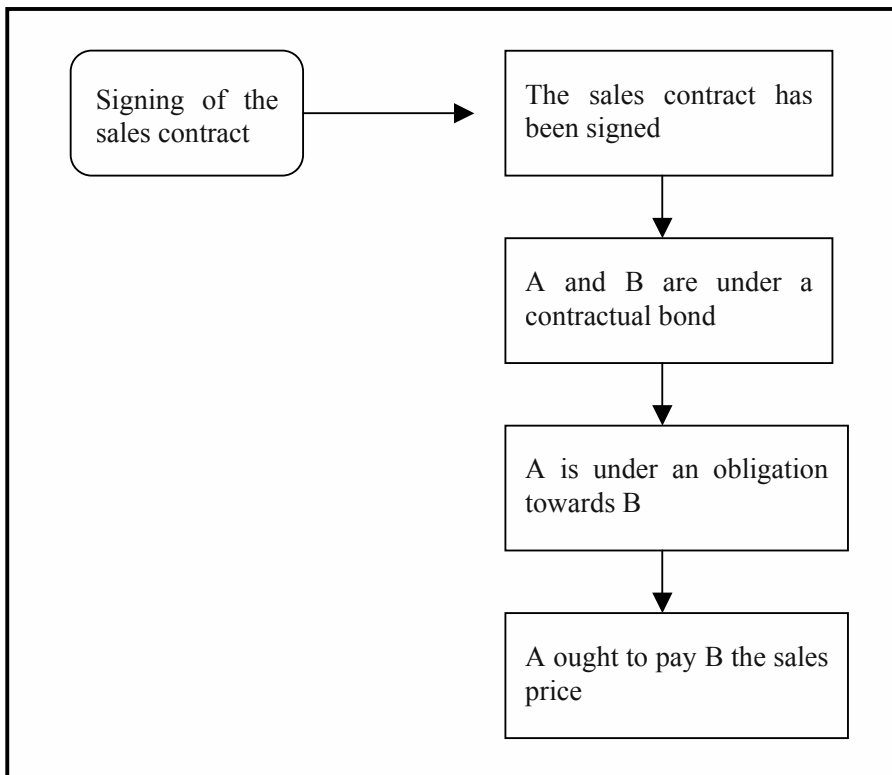


Figure 5: An event can have derived effects

An event can have effects on more than one level. For instance, the event of signing a sales contract trivially results in the state of affairs that the sales contract has been signed. The same event also has the (derived) effect that the signing parties have a contractual bond. Moreover, the contractual bond between the parties involves that the one party has an obligation toward the other party, which in turn involves that the party under the obligation has a duty to perform some action. The relations are depicted in figure 5. The vertical arrows stand for constitution.

4.2 Supervenience of events

Events can supervene on other events, just as states of affairs can supervene on other states of affairs. This is illustrated by the example of the signing of a contract that indirectly leads to the existence of a contractual bond (cf. figure 5). The event of signing of the sales contract is in a sense also the event of engaging into a contractual bond. Engaging into a contractual bond *supervenes* on the signing of the contract.

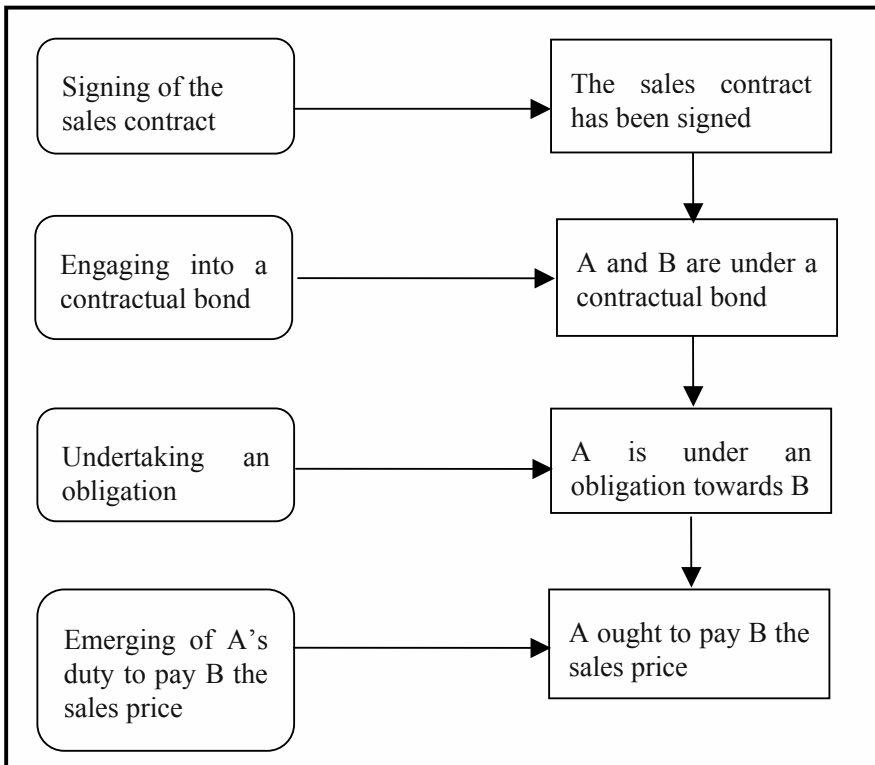


Figure 6: An event can supervene on another event

Each of the derived effects of the signing of the sales contract in figure 5 can be regarded as the result of an event that supervenes on the signing of the contract, as shown in figure 6.

In figure 6 arrows seem to be used in a new way, namely between supervening events. However, if the alternative way of depicting events (as in figure 4) is used, it turns out that the supervenience of events can be regarded as a special case of the supervenience of states of affairs. Cf. figure 7.

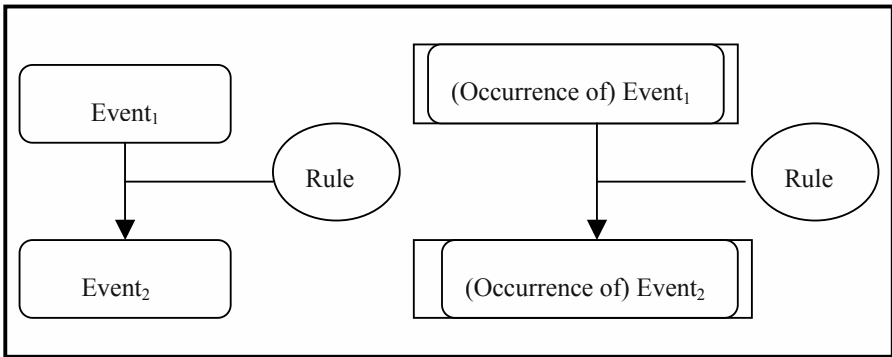


Figure 7: Two ways of depicting the supervenience of events

5. RULES

A connection between states of affairs which makes that one state of affairs ‘brings about’ another one, either in the sense of constitution and causation, is called a *rule*. It is, for instance, a rule that if a contract is signed, a contractual bond between the contracting parties comes into existence. The formulation of a rule should be distinguished from the state of affairs that this rule exists. It is possible to formulate all kinds of rules, but obviously not all of these possible rules exist. The existence of a rule is a particular state of affairs, which may obtain or not. Connections between states of affairs can only be based on rules that actually exist.

The reader should be aware of other philosophical and legal connotations of the term ‘rule’ that might be confusing. Rules in the sense of this chapter include many divergent phenomena, such as physical laws, rules of

evidence, power conferring rules, and (other) legal rules.¹⁰ For instance, Newton's law of gravitation is in my terminology a rule, because it connects the states of affairs that two bodies have masses m_1 and m_2 , and the state of affairs that these bodies attract each other with a force equal to Gm_1m_2/r^2 (where G is the gravitational constant and r is the distance between the gravitational centers of the bodies).

It might be a rule of evidence that if three independent witnesses saw someone commit the crime, this person counts as having committed the crime. This hypothetical rule connects the states of affairs that Peter, Paul and Mary saw Snoopy kill Ice T, and that Snoopy counts as having killed Ice T.

It is a power conferring rule that if the legislator attributes some legal body with the competence to perform a particular juridical act, this body can perform that act. This rule connects for instance the states of affairs that the legislator gave the community council the power to make by-laws and that the community council can make by-laws.

In section 2 I mentioned two fundamental types of connections between states of affairs, namely constitution and causation. This distinction corresponds to a similar distinction between types of rules. If one state of affairs constitutes another one, there is a *constitutive rule* underlying the connection.¹¹ An example is the rule that someone is checkmated if the King is threatened and the threat cannot be taken away in one move. The state of affairs that the King is threatened and the threat cannot be taken away in one move is the *reason* that someone is checkmated.

A state of affairs can be brought about by an *event*. Rules that govern the relation between an event and the effects that result from it are called *causal rules*. An example is the rule that heating an object (an event) makes that the heated object is warmer than before. The event does not have to be a purely physical event. For instance, signing a sales contract is the (legal) cause for the existence of a contractual bond.

Since the condition part of rules can only contain states of affairs, there is no place for events in the rule conditions. Therefore causal rules must attach consequences to *the occurrence* of an event, which is a state of affairs, possibly in combination with other states of affairs. For instance, there might be a causal rule that if somebody has the competence to make regulations (a

¹⁰ Rules in this sense are comparable to constraints in the sense of situation semantics. Cf. Barwise and Perry 1983, 94f. In chapter 5 the function of rules as constraints plays a central role.

¹¹ Notice that my use of the term 'constitutive rule', which is opposed to a causal rule, deviates from Searle's use, which distinguishes between constitutive and regulative rules. Cf. Searle 1969, 33f.

state of affairs) and exercises this competence (the occurrence of an event), the regulation that was made is valid (state of affairs of the conclusion). This construction is depicted in figure 8, in which the causal rule connecting the states of affairs that L is competent and that L makes regulation XYZ to the state of affairs that regulation XYZ is valid, is represented as a circle.

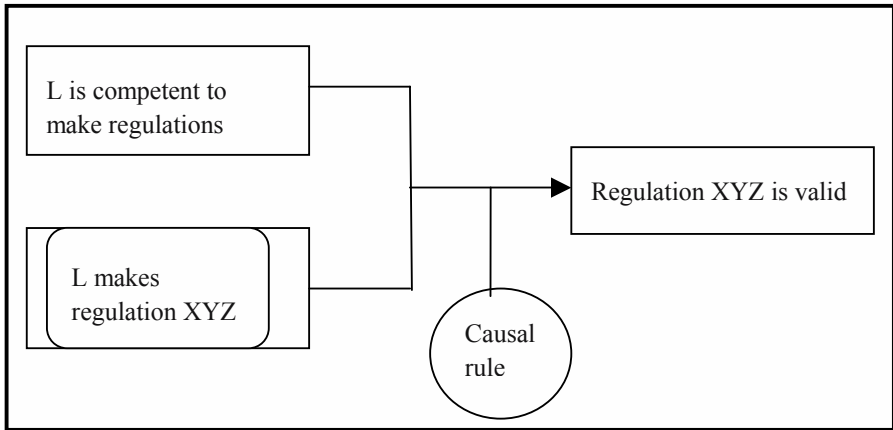


Figure 8: The occurrence of an event as a state of affairs

6. SIGNING A SALES CONTRACT

In the sections 6 to 11, I illustrate the uses of the abstract model of the law by analyzing some central legal topics. As a first example of the application of the abstract model, I elaborate the example of signing a sales contract that was used throughout the discussions above. The following figure extends figure 6.

The figure counts eight states of affairs, four events, and three rules. Four of the states of affairs form the initial state, where:

- the sales contract has not been signed by A and B,
- A and B are not under a contractual bond,
- A is not under an obligation towards B, and
- it is not the case that A ought to pay B the sales price.

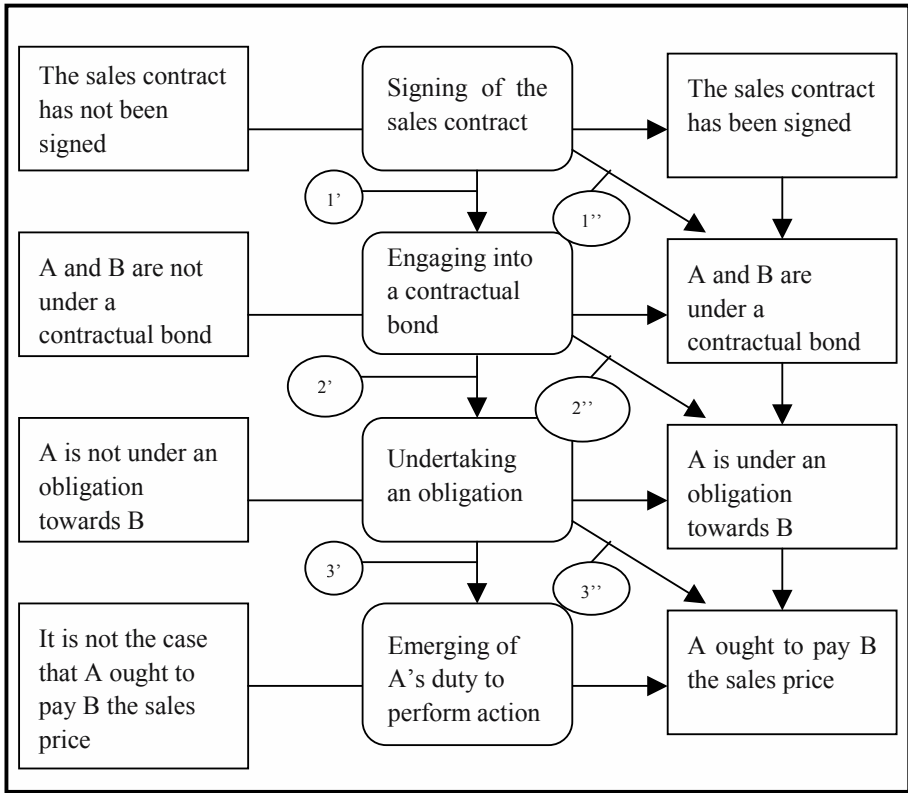


Figure 9: Signing a sales contract

In this initial state, four events take place:

- A and B sign the sales contract,
- A and B engage into a contractual bond,
- A undertakes the obligation towards B to pay him the sales price,
- the emergence of A's duty to pay B the sales price.

These events lead to the four states of affairs that form the final state:

- the sales contract has been signed by A and B,
- A and B are under a contractual bond,
- A is under an obligation towards B, and
- A ought to pay B the sales price.

The states of affairs in the final state supervene on each other: the state of affairs that A ought to pay B the sales price supervenes on the state of affairs that A is under an obligation towards B, which in its turn supervenes on the state of affairs that A and B are under a contractual bond, which supervenes

on the state of affairs that the sales contract has been signed by A and B. The connections between these states of affairs result from three rules:

1. Signing a sales contract leads to a contractual bond.
2. A contractual bond implies obligations of the contracting parties towards each other.
3. An obligation implies the duty to perform the contents of the obligation.

The events also supervene on each other, just as the final states of affairs. The emergence of A's duty to pay B the sales price supervenes on A's undertaking the obligation towards B to pay him the sales price. A's undertaking of this obligation supervenes on A and B's engaging into a contractual bond, which in its turn supervenes on the signing of the sales contract. The connections between these events result from three rules, closely related to the three rules above:

- 1'. Signing a sales contract is a form of engaging into a contractual bond.
- 2'. Engaging into a contractual bond implies the undertaking of obligations of the contracting parties towards each other.
- 3'. Undertaking an obligation implies the emergence of the duty to perform the contents of the obligation.

In figure 9, three more rules are marked, which non-trivially connect the events and the final states of affairs:

- 1''. Signing a sales contract leads to a contractual bond.
- 2''. Engaging into a contractual bond implies obligations of the contracting parties towards each other.
- 3''. Undertaking an obligation implies the duty to perform the contents of the obligation.

There are also the trivial connections between the events and the states of affairs that start to obtain by them, e.g., the event of signing the contract that leads to the state of affairs that the contract has been signed. Notice that the non-trivial effect of an event (as results from the rules 1'', 2'' and 3'') is the trivial effect of its supervening event. The rules in a triplet such as 1/1'/1'' are closely related and are in practice not distinguished.

7. CLASSIFICATION

An important topic in law is classification. To make a legal rule applicable, a factual situation must be classified, to make it fall under the rule's

conditions. It is important to note that classification in the law is not just determining whether something falls under the meaning of a word, but also assignment of a particular status. The possible outcomes of classification encompass diverse states of affairs. Something or somebody may be classified as, for instance, a vehicle, tortuous, force majeure, the cause of particular damages, mens rea, competent to issue licenses and liable to be punished. In the present model of the law, classification is treated as a special case of constitution. This means that classification is taken to be based on constitutive rules.

One type of classification is subsumption of a concrete object under an abstract category. The determination of whether some object classifies as a vehicle is an example that has become traditional.¹²

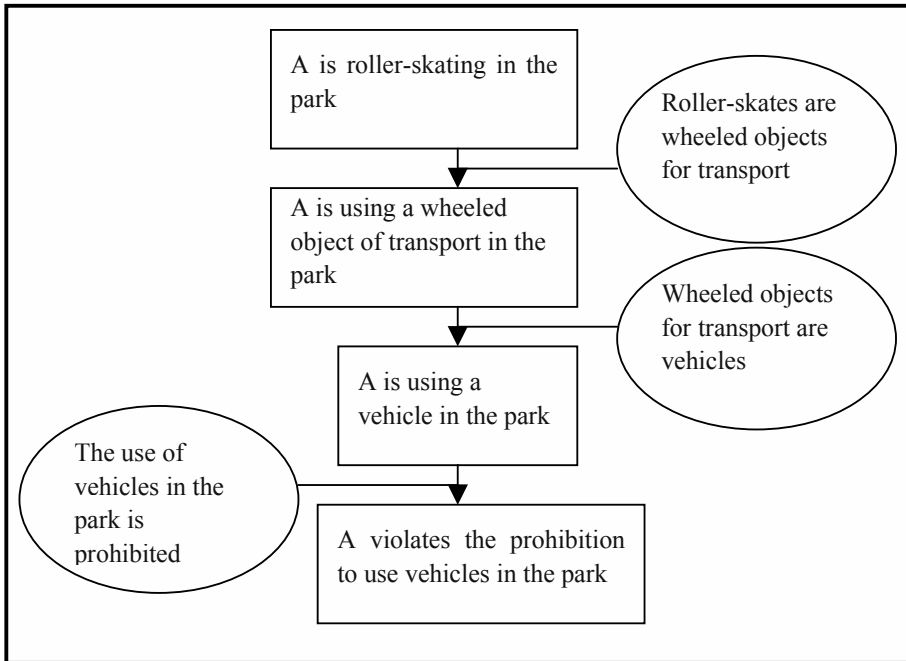


Figure 10: Classification as subsumption

Assume that there is a rule that the use of vehicles in the park is prohibited, and also a rule that defines vehicles as objects on wheels which are meant for transportation. Can roller-skates be classified as vehicles in the sense of

¹² Cf. Hart 1961, 123f.

the first rule?¹³ Since roller-skates are objects on wheels meant for transportation and therefore vehicles, somebody roller-skating in the park is violating the prohibition to use vehicles in the park:

As a second example of classification, I discuss the classification of a tort as the cause of damages. In the Netherlands, a tort is classified as the cause of damages if the tort was a necessary condition (*conditio sine qua non*) for the damages and the damages can reasonably be imputed to the tort. In the present model, imputation is depicted as follows:

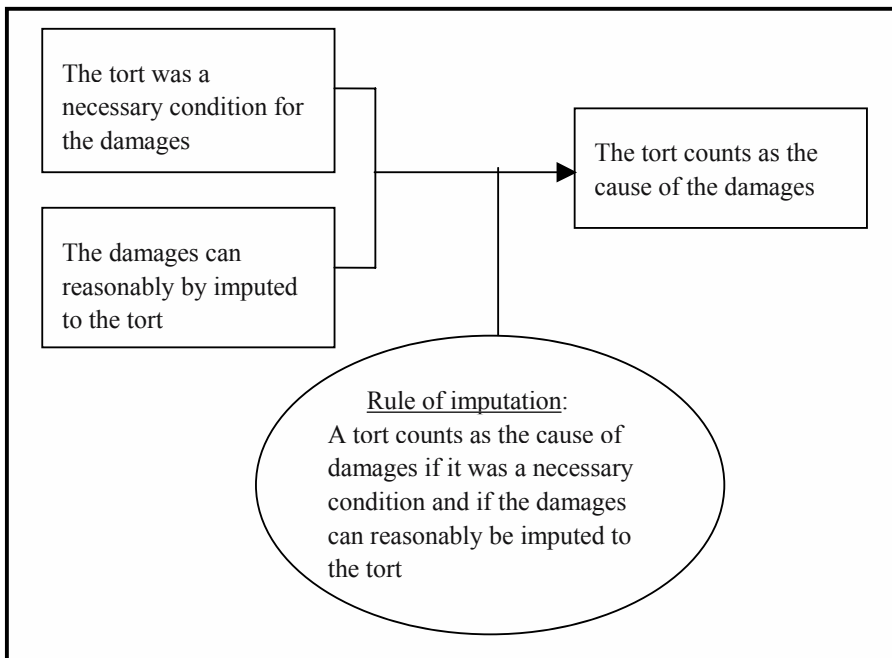


Figure 11: Classification as imputation

8. RIGHTS

I discuss three kinds of rights in terms of my model: claims against some concrete person (*iura in personam*), property rights (*iura in re*), and human

¹³ In this example I assume that there is no special rule that governs the issue whether roller skates are vehicles.