Legal Dogmatics and Academic Education

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1 Introduction

1.1 General starting points

Labelling academic education as an independent objective, as if it could be separated from academic education as such, is a misunderstanding. By this I mean that this type of education must be integrated in the courses that are part of the academic curriculum. Education can only be deemed academic in nature if this is exclusively the case. This means that the education must be focussed on making the students understand how a theory which is expressed in a subject comes into being, and how this can be reflected, added to, extended and improved. For brevity's sake we refer to this as theory development.

I interpret theory, following De Groot, as a system of logically related and, in particular, compatible assertions, views and definitions concerning a reality field, which has been formulated in such a manner that verifiable hypotheses can be deduced from it (De Groot 1969). A theory makes connections between observations.

The above statement does require some qualifications. There are subjects which form part of the core of a course, and subjects which have a supporting and generally exploratory function. Consider hereby, for example, subjects such as statistics or mathematics, which teach specific techniques that are necessary in order to be able to conduct the research for the purpose of theory development in the core courses. In these subjects the intention is not to teach theory development; that takes place in other courses.

Theoretical knowledge is (ultimately) intended for the purpose of ordering observations. This knowledge is checked against reality and therefore also applicable to this reality. In other words: theoretical scientific research (virtually) always goes hand in hand with practical application, if not right away, then within a foreseeable period and sometimes in a manner which cannot be predicted. As will be described, students learn the skill of conducting scientific research on the basis of the practical application of scientific knowledge. In almost all scientific courses, therefore, a dual result emerges, meaning that students on the one hand have the (initial) skill of being able to conduct scientific research, while on the other hand they are also able to apply scientific knowledge. It is known that this is also the case for legal courses.

1.2 Problem definition and research objective

In legal courses there are a number of central subjects within which the concepts developed in various areas of law – private law, public and administrative law, and

criminal law – are studied in their mutual cohesion and application. We refer to these subjects as dogmatic. We can refer to the entirety of the systematically ordered concepts as dogmatic legal theory. This theory has a long tradition, but contemporary Dutch dogmatic legal theory is without a doubt strongly influenced by the work of nineteenth-century German lawyers, sometimes referred to under the name 'Rechtswissenschaft' (Legal Science). Although the practitioners of German dogmatic legal theory therefore spoke of science, it is not always clear what its subject and method was (Reimann 1990).

It is remarkable that, within Dutch dogmatic legal science, this is still the case.[1] It is therefore all the more remarkable that law students are still being instructed in drafting dogmatic theory. One may presume that making the methods of dogmatic legal science more explicit was never considered necessary because they are implicitly included in the manner in which education is provided within the dogmatic subjects. This is further suggested by the fact that, within the dogmatically tinted legal investigations, there is hardly any account of the methods used. In legal science a personal narrative manner has developed on the basis of tradition, whereby the research results are presented. Tijssen (2009) refers to this in his dissertation, following Voermans, as 'following elephant paths'.

Previously I developed a model whereby the evolution of dogmatic legal theory design can be made more explicit.[2] This concerns, amongst other aspects, the application of the empirical cycle constructed by De Groot, which forms the final element of an evolution of the application of mundane knowledge to theory design. The ideas of De Groot are widely accepted and used by social scientists.

The starting point of the article before you is that this evolution must be 'repeated' during an academic study in empirical subjects. My objective is to investigate how this is done in the legal dogmatic education. Until now this growth from mundane knowledge to theory design is implicit. A lot can be said for making the several steps to be taken more explicit, because it would make the course toward theory design run more efficient. Many matters which now remain implicit could be denominated and discussed in the interaction between lecturer and students. Furthermore, cooperation with other scientific areas can be greatly improved if a connection is sought to generally accepted methodological starting points.

1.4 Structure

In section 2 I will provide a short overview of the ideas of De Groot regarding the evolution of mundane knowledge into theory design. During academic study a student must take various steps in order to complete this evolution. In section 3 I will develop a general model by which these steps and their content can be

1 See for example Peczenik, Lindahl and Van Roermond 1983. At the beginning of this century a heated and comprehensive discussion was conducted about this subject in the Netherlands, which has not resulted in unanimity.

2 Struiksma 2012. Also available on http://hdl.handle.net/1871/38649 and http://ssrn.com/abstract=2168660 or http://dx.doi.org/10.2139/ssrn.2168660 (Struiksma 2012). For a better understanding of the article before you, reading of this publication is recommended.

understood. Section 4 contains an analysis of the specific characteristics of legal dogmatic theory design, on the basis of the model referred to earlier on (Tijssen 2009). In section 5 the steps, described in section 3, will be applied to the legal science course. Section 6 will contain a conclusion.

2 The empirical cycle

De Groot has described how the development from mundane thinking processes to the scientific approach should be imagined. Man can reflect on the process whereby he gains experience. He is aware of a specified objective which he keeps in mind, of the resources which he uses, the choices which he makes within that context, and the effects which specific resources produce with a focus on the objective to be achieved. An evaluation therefore takes place, whereby the effectiveness of the resource in relation to the objective can be recorded. The result of the evaluation can be stored in his memory to be used at the next opportunity.

Man is aware of his presumption of cohesion within reality, of expectations with regard to the effect of his responses to this reality and of the fact that he tests these expectations through his response. There is therefore a cycle of psychological processes which support and influence this interaction with reality. De Groot refers to this cycle as an empirical cycle within thought processes and describes this as follows (De Groot 1969, p. 6):

> 'observation-supposition-expectation-testing-evaluation'

Because man is aware of the manner in which actually occurring problem questions can be solved, he can also define those solutions separately from the problem questions. He no longer responds only to practical problems, but also defines theoretical problems. This is referred to as a 'shift from end to means' (De Groot 1969, p. 7).

I will provide an example here. During the developmental history of humanity, farmers have quickly gained experience with regard to types of crops, signs of change in the weather and the consequences of seasons. They gained this practical knowledge by making decisions about times for sowing and harvesting. That seasons change is a fact of common knowledge. Even in the early history of mankind, this fact was not just accepted, but people also sought explanations. There was soon a shift from end to means: the knowledge (the changing of the seasons) whereby a problem (decision on sowing and harvesting) could be solved, was defined as a problem. At first, the explanations were sought in the supernatural, but subsequently – after the necessary theoretical interim steps – people realized that the trajectory of the earth around the sun, and the tilting of earth's axis in relation to its trajectory, formed an adequate solution to the problem. Further-

more, a theory was formed that was not limited to decisions that can be substantiated in the context of agricultural operations.[3]

According to De Groot there are cycles for the various stages of abstraction of the experience from reality and reflection on the knowledge gained. For the most abstract forms of the cycle he refers to the thinking subject: he gains real experience from the outside world, he becomes aware by reflection that he does so, he defines the finding of resources as a problem and seeks to solve that problem, he carries out part of this mentally with the focus on complex, abstract objectives set by culture, possibly with the aid of specific or abstract models of the part of the 'world' it concerns – and whereby the subject ultimately will enter into consultation with others about his process of experience (De Groot 1969, p. 17).

The reasoning followed and the research conducted must be presented for the purpose of communication. This implies that the thinking and research method used, and the results found, must be represented in such a formalized manner that the 'forum members' can follow the reasoning. This does not only set requirements for the manner in which the cycle is presented, but also for the way in which the reasoning and the results are worded. These must, as it were, be 'standardized' or, if new, be brought in line with wording which is already standardized. Science strives for explicit, transferable knowledge (De Groot 1969, p. 19).

De Groot has referred to the process of theory development as the scientific empirical cycle, whereby he makes a distinction in the following five stages (p. 28):

1. Observation: collating and grouping of facts material.
2. Induction: formulating of hypotheses.
3. Deduction: deducing special consequences from the hypotheses in the form of verifiable predictions.
4. Testing of the hypotheses against the realization, or otherwise, of predictions in new empirical material.
5. Evaluation of the result of the testing.

3 Course for theory design in general

When a student starts an academic course he will, as it were, find himself in the situation in which our predecessors found themselves at the time that scientific development had yet to start. He must, in a limited time, repeat an evolution of the application of the mundane, practical knowledge to theory design, with which others have potentially been occupied for centuries. However, there is a difference: the scientific knowledge is present in a condensed form and the core of this can be transferred in a relatively short time. Somewhere in that short time the student will have to make a shift from end to means.

3 Example derived from Deutsch 2012, p. 24.

Firstly, a student will have to become aware of connections in the relevant reality area and of the existence of scientific theories with which those connections are described. It must become clear to him that there are elements in the relevant reality area for the course to which the theory can be applied. Not all elements are relevant, and he will therefore have to make a selection in the light of the theory. The problem is therefore that he must know the theory in order to be able to select the relevant aspects, while he must learn to apply the theory on the basis of the relevant aspects. This impediment can be overcome by the lecturer dealing with problem questions to which the theory can be applied. In the course of this he will demonstrate what the relevant aspects of the problem question are, as well as why they are relevant, i.e., in the light of the theory. The lecturer acts as a role model, namely as an expert. An expert has such extensive knowledge of theory and practice that he intuitively senses, in many cases, which theory must be used in a given case. However, education and experience are the basis of this knowledge and intuition. The lecturer must be aware that this knowledge and intuition cannot be transferred just like that, but that it primarily concerns the teaching of the reasoning process. He must be able to imagine himself in the position of an ignorant person. He must therefore start with simple applications, whereby the applicable theory can be found immediately by the simple selection of not too many relevant observation aspects. Subsequently, the degree of difficulty can be increased by offering a number of possibly applicable theories and to have the number and complexity of the observation aspects increased. The student now has to make choices, on the theoretical as well as observational side, in the course of which he will subconsciously follow a mental empirical cycle with reflection referred to by De Groot (1969, p. 12). There is an *objective* (the finding of an applicable theory) which is a *problem* for the student. There is a certain *freedom* during the choosing of applicable theories, and there is also *uncertainty* about the question of which theories will be most applicable. The student makes a tentative *choice*, applies the theory, by *trying*, to the aspects concerned and *verifies* by assessing if the chosen theory can connect those aspects sufficiently. If not, then a new theory can be chosen, or the choice of the relevant aspects can be changed. Subsequently, the cycle will be repeated, until the required result has been achieved. To reinforce the learning process, a lecturer must check the steps followed by a student, and if necessary improve them or provide an example. Unfortunately we have noted that this, given the large scale of most courses, is not always possible.

Gradually the student becomes familiar with theories by applying them deductively to problem questions. To do so it is always necessary to apply a theory to the correct aspects of a problem question. By coming into contact with a large number of problems, he learns to see that problems are comparable, in the sense that they have similar aspects which can, by induction, all be brought under a specified theory. This often appears in the following form: problem question A looks like problem question B. Theory X is applicable to problem question B; let us see if X can also be applied to A. This is, of course, no problem if the aspects of A and B can be generalized in the same manner, but if this is not the case, then this

does not mean that X has to be unusable. It can possibly be adjusted in the sense that it retains its general working method, but works for a number of special cases. At that time there is theory development, which can be demonstrated within education after some time, for example after the core doctrines of a subject have been taught. At that time the student has learned that the characteristic of a theory is that it describes a connection between a large number of cases. In the beginning the student sees the application in one case, and by consistently bringing cases under the theory, similarities in the cases will become apparent. At that time it can dawn on the student that the theory is made from the similarities of the cases, while the test is always if the next case also falls under it.

In summary, the student first learns to generalize the aspects from the particular details of the case which can fall under a theory, and to verify the applicability of that theory by means of deduction. There is a tacit assumption thereby that a theory can be found which will be applicable to all comparable cases now and in the future.[4] Subsequently, the student learns to generalize comparable cases to form the theory in the course of which the objective changes. The problem is no longer finding an already existing theory which is applicable to a specific case, but to form a new theory or to adjust an existing theory in such a manner that it will be applicable to many cases. It does not concern the practical application of a theory as an objective, rather the theory design is the objective.

The manner of reasoning to be followed during theory design must be imprinted step by step. On the basis of studying and internalizing examples, the student is guided to personal theory design. The guiding principle thereby is that, primarily, the presence of a theory is given together with the representation of a limited number of observations which do not, at a glance, fall under the working of the theory. Let us call these observations problematic observations. The assignment is to adjust or extend the theory in such a manner that the problematic observations can be brought under the working of the theory. In the beginning the assignments will be simple. Later on the assignments can be more difficult, in the sense that a theory to be adjusted does exist, but must be found by the student himself. Furthermore, it cannot be clear from this theory that it is applicable. It is also possible that the theory is in parts internally contradictory. The degree of difficulty can be increased by presenting a larger number of problematic cases, of which it is furthermore not immediately clear what the connecting factor in their problematic character is. However, what these assignments do have in common is the fact that the theory must be described, including the relevant published literature, from which possible solution directions can be derived. After this an analysis will be made of which observations or parts of the theory are problematic and why this is the case. The analysis will result in induction of the similar aspects of the problematic observations and parts and a presumption of the manner in which the theory must be adjusted so as to be applicable. After adjustment, the theory will be applied in a deductive manner to the problematic observations, but,

4 Of course we know that the induction principle is not tenable from a formal point of view, but in practice it is indispensable.

for the purpose of verification of the integrity of the theory, also to the previous non-problematic observations. This application can provide various outcomes: (1) after application the theory works without difficulty, (2) the application solves the problems only partially, (3) the application causes new problems. In the latter cases the similar aspects of the problematic observations will be again induced until there is a presumption of solution.

Ultimately some students will reach a level which enables them to not only independently adjust existing theories, but also to form new theories and to conduct research of a large extent and scope. This level is required to be able to complete a doctoral thesis.

It goes without saying that the student acquires competence in scientific reasoning methods while at the same time mastering the rules for proper scientific reporting procedures.

The steps students go through in the course for theory design can be summarized as follows, on the basis of the previous section.

1. *Initiation by practical applications*
A student must become aware of the existence of scientific theories and their workings. For this purpose he discovers that there are elements in the reality area relevant to the course to which the theory can be applied. Not all elements are relevant, and that is why he must form a selection in light of the theory. The problem is therefore that he must know the theory in order to be able to select the relevant aspects, while he must learn to apply the theory on the basis of the relevant aspects. This problem will be overcome because the lecturer deals with simple examples, whereby he shows what the relevant aspects in the problem question are and also why they are relevant, i.e., in light of the application of the theory.

2. *Deepening by practical application*
The degree of difficulty of the practical application will be increased by offering a larger number of possibly applicable theories and to have the number and complexity of the observation aspects increased. Now the student must make choices, on the theoretical side as well as on the observational side. He thereby follows a mental empirical cycle.

3. *Recognition of theory development*
By solving a larger number of problem questions with the aid of a theory, a student learns to see that problem questions are comparable, in the sense that they have similar aspects which can, through a cycle of induction and deduction, always be brought again under a specified given theory. The student breaks free from the practical application of a theory and makes the shift from end to means. He realizes that a theory, by means of induction and deduction, can be formed from problem questions.

4. Initiation into theory development
The student takes the first steps while going through of the scientific empirical cycle. The assignments are simple, in the sense that quite a lot of details are handed out ready-made. Through examples the student learns the application of methods relevant to the various stages of the cycle.

5. Deepening of theory development
The student takes further steps. The assignments are more complex; gradually fewer details are handed out.

6. Independent theory development
The student formulates, if necessary with some directions, a personal definition of a problem and research hypothesis and independently goes through the scientific empirical cycle. However, the extent and scope of the research are limited. If that limitation is removed we are talking about research for the purpose of a doctoral thesis.

4 Legal science theory design

Somewhere in the history of the development of law, perhaps even at different times, the shift was made from end to means. Law was primarily seen as being of supernatural origin; much later awareness appeared that law is made by humans.

The basic material in dogmatic legal science comprises the concepts through which relations and conduct are indicated, and the accompanying definitions (Struiksma 2012, p. 12ff). These concepts are not directly derived from reality, but from the representation of this reality in the form of judgements that were and are delivered for the resolution of disputes. The disputes are the empirical material of the science. The definitions function in rules intended to influence conduct and which are applied to resolve disputes. Relations and conduct, as they have actually occurred, are transformed in dispute resolution through the classification of facts and circumstances into concepts from which the rules are constructed, as a result of which those rules can be applied to the dispute to be resolved.

Through centuries of (still on-going) development, the concepts are provided with definitions by science in the form of an inductive/deductive process, by studying the manner in which they are applied in the resolution of disputes. They have therefore arisen from the practice of dispute resolution. Subsequently these concepts have also again been placed in increasingly large collections of concepts. Especially through the fact that science provides concepts with a uniform description, it is possible for these concepts to acquire a general working in the form of regulations.

The sources from which the theoretical body of concepts is added to, and against which they are verified, increase in extent and number during the development of

the law and legal science. It no longer concerns merely the judgements, but also the commentaries. In these commentaries the meaning of a judgement, and more particularly the meaning of a specified concept is discussed in light of a specified doctrine. Does the judgement fit within that doctrine, or is this not the case? On the basis of such discussion all sorts of follow-up questions can be posed, such as: Was this a rarity? Was it just about an error? Does this provide a new opening? And if so, what does this mean for the system of a doctrine?

Furthermore, the meaning of a specified concept, or at least the start of this, is (also) derived from the explanation of that concept which the regulator has provided in the context of the formation of rules.

The body of concepts is described and subdivided into doctrines in manuals, textbooks and monographs. They are indispensable in the search for differences of opinion and knowledge gaps, i.e., to formulate research hypotheses. Furthermore, there are dissertations in which the results of new research are presented. Although such research relates to a manageable research topic, the design is broad, in the sense that an extensive exploration of the state of affairs takes place, following which the research topic can be verified against a broad range of sources. In addition there are publications in magazines in which results from research are presented. Research publications can serve as the starting point for follow-up research.

In all this the judgements remain the most important source. Ultimately all judgements which are delivered about definitions and their cohesion are verified against the manner in which concepts are actually applied. Whatever meaning scientists, regulators or advisors give to definitions, it is ultimately the adjudicator who determines the final meaning, although this takes place in an indirect manner (Struiksma 2012, section 17ff).

In recent years pure dogmatic research has reduced in numbers. Annotations are being made and the manuals are kept up to date, but dissertation topics are increasingly interdisciplinary and multidisciplinary in nature (composite research). One could therefore argue that the course in theory design, especially with regard to the education of research methods, must be more focussed on the fields that are relevant for the composite research.[5] This appears to be correct, but we must not lose sight of the fact that the maximum amount of credits to be achieved in the academic studies are fixed and that, in any case, plenty of attention must be paid to the dogmatic subjects, because they are required in the context of the 'civil effect' (a master's degree with 'civil effect' is a condition for admission to the legal professions or judiciary). Furthermore, it is necessary to maintain the skill of dogmatic theory design, because if this were to be lost in the times to come, the tenability of positive law would be affected from the inside and composite research would also no longer be possible.

5 See, e.g., Van Gestel, Giesen & Van Boom 2012.

5 The course in legal science theory design

Through the courses in dogmatic subjects, the steps described above in the development of legal science must again be gone through in a condensed form: from learning the application of rules to cases, to the forming, maintaining and systematizing of the concepts by which those rules are formed. A problem is that the students, at least to my knowledge, are not being taught that it concerns a scientific theory in the body of concepts. They are traditionally taught the meaning of concepts in the form of solving a case, whereby the impression arises that the only objective is to learn to apply rules. They therefore do not apply at first sight a theory, but instead rules with which disputes can be solved. Indeed, rules are not in themselves a theory, but the rules are formed by concepts which are derived in a scientific manner from practice. One tends to argue that this is a study focussed on practice. However, to learn to apply rules is only a means to teach students the meaning of concepts in their mutual cohesion, a necessary condition to be able to make the step toward theory design. I think that in the current curricula not enough specific attention is paid to this.

1. Initiation by practical application

The student must become aware of the existence of scientific theories and the working thereof. For this purpose he discovers that there are elements in the reality area relevant for the course to which the theory can be applied. Not all elements are relevant, and that is why he must reach a selection in light of the theory.

The student will be handed simple legal cases and the lecturer provides an example, from the facts and circumstances of which a selection must be made, and in which manner this must be translated into concepts to be able to apply a legal rule with which the dispute processed in the case can be solved. The student learns about variants which can be solved in a comparable manner, as well as on the basis of the example case from the law of precedent. The student learns the definitions and their application on the basis of a textbook or manual. A start is made on the teaching of the mutual connection of the concepts.

2. Deepening by practical application

The degree of difficulty of the practical application will be increased by offering a larger number of possibly applicable parts of the theories and by increasing the number and complexity of the observation aspects. Now the student must make choices, on the theoretical side as well as on the observational side.

The student gets handed more complex cases in which it is not immediately clear how facts and circumstances must be classified in light of a specified part of the theory. Depending on the classification, various parts of the theory are applicable. There is not only one answer which is correct at face value. Various sources must be studied and compared in order to obtain a proper view of the meaning of concepts.

3. Recognition of theory design

By solving a large number of problem questions with the aid of a theory, a student learns to see that problem questions are comparable, in the sense that they have similar aspects which can, through a cycle of induction and deduction, always be brought under a specified given theory. The student breaks free from the practical application of a theory and makes the shift from end to means. He realizes that a theory, by means of induction and deduction, can be formed from problem questions.

In the application of law to more difficult cases it often concerns demonstrating that a rule can be applied by showing that the rule has also been applied in a comparable case. Of course, for this it must first be made plausible that it does indeed concern a comparable case. Viewed in that light the student must be able to interpret the meaning of the concept (as part of the rule) to be applied on the basis of as many sources as possible. Subsequently he must demonstrate that the relevant facts and circumstances of the case under consideration and the example case can be brought under the concept in the same manner, possibly by first varying the meaning of the definition within certain, but responsible, margins by following an interpretation method.[6] During this process, theory design takes place in a certain sense, because the meaning of a concept must be tentatively adjusted. So there is formation of a hypothesis, albeit in the context of a practically focussed application. Still, the emphasis is beginning to shift to the theory, because a hypothetical adjustment does not only have to be verified in practice, but also in theory. Since an adjustment is not possible if the cohesion with related concepts is affected, and also not without the earlier application if the concept is corrupted. Also, possible future applications of the concept can be tried out on the basis of imaginary cases. In this manner the student will become more familiar, while solving difficult cases, with the requirements which the theoretical system sets for practical applications. He makes the shift from end to means, but this jump is not marked in the course and is also not recognized by many students. It is a gradual process, which is faster for one student than for another.

4. Initiation into theory design

The student takes the first steps while going through the scientific empirical cycle. The assignments are simple, in the sense that quite a lot of details are handed out ready-made.

One could argue that the usual bachelor's thesis is the embodiment of this stage.

One problem is that the following of the cycle cannot be demonstrated on the basis of examples that are used until now. The examples that exist consist of classical, narrative, legal science literature. It is not easy for students to translate these examples into their own hesitant ideas. Furthermore, it cannot be expected from these students that they set up and work out a complete research project. It is more obvious that they will limit their efforts to exploration, description of a

6 See for a splendid example of a teaching method based on this approach Rozemond 2006.

definition of a problem and the formulation of a tentative research hypothesis, and that they describe and apply the accompanying research methods. However, there are no such examples, nor a statement of the methods relevant to legal science research. That many bachelor's theses are still brought to a good conclusion may be due to the fact that students have come to recognize theory design intuitively. They can translate this intuition with a bit of effort through solid guidance, in an exploration research project, which subsequently must be put into words in the classical manner. It is important to notice that the scope of the bachelor's thesis is limited in such a manner that a complete research is simply not possible.

5 and 6. Deepening of theory design and independent theory design
The student takes further steps. The assignments are more complex; gradually fewer details are handed out. Ultimately the student formulates, if necessary with some direction, a personal definition of a problem and a research hypothesis and independently goes through the scientific empirical cycle. However, the extent and scope of the research are limited.

One could argue that this stage must be gone through in the master's degree programme, which ultimately has to be completed with a master's thesis. The master's thesis can be placed under independent theory development.

So a bridge must be built between bachelor and master's thesis. As far as I am aware, this is not the case in Dutch master degree programmes. In the master stage there is a deepening in a specified area of law, a number of optional subjects are followed and the degree programme is concluded with a master's thesis. The bachelor's thesis contains the exploratory and descriptive part of limited legal science research. In continuation of this the provisional research hypothesis could be verified against research material. This approach would assume that students would choose a master variant which connects well to the bachelor's thesis. That is not necessarily the case. So there must be another manner provided for a continued theoretical development. The solution could be found by offering students, in the context of their deepening, a research hypothesis which they then must verify against research material (partially to be found by themselves). For this part, a separate skills subject could also be introduced. It should be noted that space could also be made for this approach in the optional subjects.

6 Concluding remarks

The objective of this article was to investigate how the evolution of the application of mundane knowledge to theory design is 'emulated' in the legal dogmatic education. To do so, I used the ideas of De Groot as developed in his book *Methodology* and some theoretical insights that I laid down in *The dispute as pivot*. My investigations resulted in a model consisting of six steps: initiation by practical applications; deepening by practical application; recognition of theory design; initiation into theory design; deepening of theory design and independent theory

design. These steps can be traced down in the legal dogmatic education and should be made more visible in the education programme.

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