

Introduction to Retrograde Analysis in Law Theory

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1. INTRODUCTION

The legal profession can be defined by several characteristics. A prominent feature of legal work is the application of legal rules. Once the legal expert understands these rules, they can apply them. Legal rules pertain to real-life cases.

Often, however, events are not clarified to the degree that a diligent expert needs to work successfully. The reason for these uninvestigated events lies in the lack of evidence, because it may be concealed or even destroyed. In such situations, a diligent lawyer will resort to retrograde analysis.

Through the thought process of retrograde analysis, the lawyer will attempt to understand the event by working backward from the consequence to its occurrence.

This article therefore aims to offer theoretical guidelines for the use of retrograde analysis in law.

2. THESIS

The discussion begins with the recognition that human actions invariably produce consequences. When these consequences are observable, they constitute an objective trace of the action. Such traces enable the reconstruction of the event by working backwards from the consequence to the original occurrence. Retrograde analysis will prove effective only when it establishes a complete and uninterrupted sequence of resulting consequences and actions. In the application of a legal syllogism¹, a legal expert works from the reverse timeline, tracing the actions of the individual back to their consequences. Retrograde analysis is only relevant to the legal syllogism if it confirms that a consequence has taken place. This process of inference requires a clear lower

¹ Pavčnik, M., *Teorija prava, Prispevek k razumevanju prava*, 4., pregledana in dopolnjena izdaja, GV Založba, Ljubljana 2011, str. 314 – 315. Tudi: Pavčnik, M., *Argumentacija v pravu (Od življenjskega primera do pravne odločitve)*, 2. spremenjena in dopolnjena izdaja, Cankarjeva založba, Ljubljana, 2004, str. 31.

Translation: “Pavčnik, M., *Theory of Law, Contribution to the Understanding of Law*, 4th, revised and supplemented edition, GV Založba, Ljubljana 2011, p. 314 – 315. Also: Pavčnik, M., *Argumentation in Law (From Life Case to Legal Decision)*, 2nd amended edition, Cankarjeva založba, Ljubljana, 2004, p. 31.”.

premise (*Premise Minor*), with retrograde analysis assisting in the identification of decisive legal facts. It is crucial to distinguish which of the facts under investigation are of legal significance. Furthermore, it is important to recognize that the use of legal syllogism brings with it a range of legal complexities (the above premise). In this context, the *Premise Major* raises an important question regarding the legitimate acquisition of the facts under investigation.

3. LIMITATIONS

The principal limitation of this discussion is determined by the prevailing legal system. Adherence to existing legal rules will be maintained, which will serve as a framework for constructing a logical approach to the use of retrograde analysis in law.

Attention is drawn to the legality of evidence collection in criminal proceedings, which represents a significant issue concerning the major premise of legal syllogism (extending even to the safeguarding of constitutional principles).

In the civil law sphere, it is necessary to emphasise the prohibition on introducing new facts and evidence, as specifically stipulated by legislation.

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The integration of retrograde analysis with mandatory legal provisions establishes a distinct subfield of legal discipline, which must not modify the existing legal framework.

Similarly, the notion of a legal professional employing retrograde analysis applies universally—whether the individual is a criminal investigator with legal training, a public prosecutor, a judge, a legal assistant, a solicitor, or an injured party with a legal background.

4. PROBLEM PLACEMENT

Theoretical principles governing the application of retrograde analysis within the legal sphere are rooted in legal theory.

Employing thought processes to elucidate past events inevitably intersect with the domain of logical reasoning.

As previously noted, this approach represents a synthesis of insights from both legal theory and logical reasoning.

To maintain neutrality within the discussion, retrograde analysis will be described as a cognitive process employing a range of methods, techniques, and modes of reasoning in the field of law.

5. RETROGRADE ANALYSIS AND LOGIC

A comparison of reasoning that traces back from a consequence can be made with hypothetical syllogism. This is an example of indirect reasoning, which, according to Friškovec², is a form of deductive reasoning. Such reasoning is constructed by forming at least one compound and one simple judgement. In these cases, both the premise and the conclusion are hypothetical judgements, resulting in knowledge that is, naturally, conditional. A clearer parallel with abduction can be drawn through a hypothetical-categorical syllogism, where one premise is hypothetical and the other categorical, and the conclusion is also categorical. Abduction, when reaching conclusions, moves from what is known to what is unknown, with a significantly greater degree of speculation. Friškovec³ notes that there are two possible modes in a hypothetical-categorical syllogism: one where the categorical judgement confirms the condition stated in the hypothetical judgement, and

² Friškovec, F., Osnove logike, Višja pravna šola Maribor, Ljubljana, 1980, str. 180.

Translation: "Friškovec, F., Basics of Logic, Maribor Law School, Ljubljana, 1980, p. 180."

³ Ibidem, p. 181.

one where the categorical premise denies the consequence expressed in the hypothetical judgement.

It is important to distinguish between method and reasoning. The inductive method is a systematic, planned and consistent process in which inductive inferences are employed to establish and prove reality. Conversely, the deductive method is also systematic and consistent, relying on deductive reasoning to discover and verify the truth—this is deductive method in its broader sense. While the premises in deductive reasoning may be obtained deductively, more often they are achieved non-deductively, through generalising induction. When a conclusion is drawn from premises established inductively, we refer to this as a combined inductive-deductive method.

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Therefore, retrograde analysis also employs a systematic, planned and consistent approach as outlined in this discussion (thus forming a thought process).

Inferences regarding the origin of a consequence can also be drawn through relations. Traductive reasoning concerns itself with a specific system of relations between concepts that arise in reasoning. This is deductive reasoning, where, based on the relationships between concepts presented in the premises—which must be relational judgements—a new judgement is made about the relationships between these concepts, their properties or characteristics, which are only implicitly or indirectly provided in the premises and are transferred from certain objects or properties to others.

As this is a form of mathematical logic, it can be useful for identifying specific insights along the causal chain, although it lacks the hypothetical element necessary to move from the known to the unknown. When reasoning backwards, it can only clarify isolated links rather than the entire chain. Nonetheless, these individual links are integral to the chain, making inferences about identity or non-identity, equality or inequality, analogy and continuity far from insignificant. A comparison may be drawn with the method of selective induction, which seeks the missing link within the causal chain—typically identified through relational inference, especially connexity.

Unlike deductive reasoning, reductive reasoning incorporates an element of probable error, whereas deductive reasoning is logically determined. This gives rise to the speculative (and hypothetical) nature that allows us to move from the known to the unknown. With regard to retrograde analysis, it is possible to compare the mode of thought with regressive reduction. This process leads to the creation of new hypotheses. In regressive reduction, we begin with already established judgements and seek hypotheses to interpret them. From these explanations (hypotheses), we can deductively derive logical consequences.

The doctrine of proof also supports the integration of retrograde analysis into logical reasoning. Logicians distinguish between progressive (synthetic) and regressive (analytic) proofs. Progressive proof proceeds from established reasons and leads to the evidentiary

statement via implicit reasoning—a technique known in relational logic as the expert style. Regressive proof, on the other hand, starts from the evidentiary conclusion and traces back to the reasons for evidence. For legal professionals, this is recognised as the court style. It must be acknowledged from the outset that the doctrine of proof assumes all relevant factual circumstances have already been clarified. Nevertheless, regressive proof provides a way of thinking that begins from the consequence. When a judge works from the evidentiary conclusion back to the underlying reasons, it mirrors the process of moving regressively from consequence backwards along the timeline. The aim is to provide the judge with concrete facts from which regressive (or progressive) evidence can be derived. According to Pavčnik⁴, the concrete factual state is achieved by evaluating the facts that constitute the life event: only those facts (of the life event) that correspond to the legal factual state form the concrete factual state. Therefore, concrete facts are those which, at the level of case-

⁴ Pavčnik, M., *Argumentacija v pravu (Od življenjskega primera do pravne odločitve)*, 2. spremenjena in dopolnjena izdaja, Cankarjeva založba, Ljubljana, 2004, str. 35.

Translation: “Pavčnik, M., *Argumentation in Law (From Life Case to Legal Decision)*, 2nd amended edition, Cankarjeva založba, Ljubljana, 2004, p. 35.”

specific details, serve as components of the legal factual state.

6. RETROGRADE ANALYSIS AND LAW

The term 'retrograde analysis' is formed from the words 'retrograde' and 'analysis'. In Latin, *retrogradere* means 'to move backwards', and *retrogradatio* signifies 'returning'. Meanwhile, 'analysis', originally from Greek, means 'to break down' or 'disassemble'. Therefore, the phrase 'retrograde analysis' refers to a process of working backwards to disassemble or unravel something. This understanding is crucial to appreciating how retrograde analysis is applied in the field of law.

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The application of retrograde analysis in law is particularly evident in criminal investigations. Kaufman⁵ describes a mindset rooted in suspicion as characteristic of the way criminal investigators operate. He suggests that abduction is a possible form of reasoning based on a known result. This approach is typically employed by criminologists and prosecutors. In this context, abduction serves as a retrograde analysis, as it involves drawing inferences about the origins of an outcome. In other words, when only the consequence is known, the retrograde method is used to reconstruct the past event

⁵ Kaufmann, A., Das Verfahren der Rechtsgewinnung – Eine rationale Analyse, C.H. Beck'sche Verlagsbuchhandlung, München 1999, p. 57.

and its relevant circumstances. Theorists also link abduction with establishing the threshold of suspicion in criminal procedural law. Since not all circumstances are available, abduction helps provide grounds for concluding that there is suspicion a crime has been committed. In both instances, legal experts rely on formulating working hypotheses.

Maver⁶ also discusses the use of abstraction and hypothesis in criminology, placing them within the context of logical fallacies and their role in investigations. He observes that many conclusions in crime investigation are structured as hypothetical categorical syllogisms.

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In criminal proceedings, retrograde analysis is mentioned as a method that enables a cognitive evaluation of whether a specific past event corresponds to a criminal offence.

More generally, retrograde analysis can be seen as a process for determining whether a past event matches the objective evidence or trace found. In the context of

⁶ Maver, D., Preiskovanje in logično mišljenje, Revija za kriminalistiko in kriminologijo, Ljubljana 36, 1985, 2, str. 135.

Translation: "Maver, D., Investigation and Logical Thinking, Journal of Criminology and Criminology, Ljubljana 36, 1985, 2, p. 135."

law, retrograde analysis must focus on legally significant facts to which a legal consequence is attributed.

In criminal law, the focus is on establishing the existence of a criminal act. A past criminal act is examined using retrograde analysis to the extent that, in the present, it can be reliably determined whether all the circumstances constituting the legal elements of the offence are present.

In civil law, we can talk about the existence of liability for damages. A loss event, as a past event, is clarified by the method of retrograde analysis to such an extent in the present that it is possible to reliably conclude whether the assumptions of contractual or non-contractual liability for damages are made.

In the economic sphere, the retrograde analysis procedure can be used to determine the liability of a director for damages. The director's business decisions, as an event of the past, is clarified by the method of retrograde analysis to such an extent in the present that it is possible to reliably conclude whether he acted with the diligence of a conscientious and honest businessman in the performance of his duties.

In labour law, the aim is to identify breaches of duties by either the employer or employee. Events from the past are analysed retrogradely to determine whether there have been violations in the fulfilment of the employer's or employee's obligations.

In the field of environmental protection, particular attention is paid to clarifying the relevant circumstances, and retrograde analysis is instrumental in establishing the actual situation.

This discussion seeks to extend the application of retrograde analysis to other branches of law and that with a general sign.

The article draws on the findings in use of deductive, inductive and abductive ways of thinking in law, that have been published so far.

6.1. General Outline

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At the outset of resolving a legal case, every legal expert is confronted with the task of comprehending the actual circumstances of a specific, real-world situation (concrete case). The materials provided reflect the current situation (state of fact). From the pile of data, the law expert must deduce those facts that provide support in resolving the legal entanglement. The complexity of the legal case can escalate. The biggest challenge is solving complex legal issues. In this article, we want to touch on those cases where a law expert has only a consequence at his disposal and has yet to find the material facts. The very search for decisive facts in a pile

of (given) data constitutes a legal complication. Only the (prior) search for data, however, raises the level of complexity to a higher point.

A law expert in any legal field must extract decisive facts from the material offered (EPV₃). So much more difficult is his task if he has yet to collect data (EPV₁₋₂).

Legal technique discusses legally significant facts. Later, the judge, as the supreme authority of the adjudication, will give his justification of the judgment on legally significant facts placed in the chain of cause and effect. We take the view that the path of knowledge of the judge, whether from consequence backwards or from individual actions to consequence, is not problematic. The judge will already have the facts clarified and will be able to draw inductive and deductive conclusions about the consequence.

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However, to arrive to that point (i.e. clarified facts), it is necessary to use other methods, techniques and thought processes in certain cases.

Retrograde analysis must be used by the investigator to clarify the facts for the judge, finally given as a confirmed cause-and-effect chain of events and consequences. In the criminal field, confirmed cause-and-effect chain, is provided by law enforcement agencies. In the civil field, litigants.

When the cause-effect chain is cleared, the lower premise (*premise minor*) of the legal syllogism is formed. The clarification of legally significant facts, then allows

the use of legal instruments. Of course, at different stages of the judicial process, different completeness is required (continuity is essential) of the latter chain, which must be complete at the time of the criminal conviction or the time of issuing favorable verdicts (judgments) of the court of justice. The path of legal instruments in the criminal field begins with the reporting of a crime. In the case of litigation, a request for temporary court security or a request for the securing of evidence. Retrograde analysis makes it possible to file these instruments, collecting the necessary evidence. To put it in the language of retrograde analysis: to enable a continuous cause-and-effect chain. This makes it possible to conclude on the existence of reasonable suspicion for initiation of a judicial criminal investigation. And to conclude a risk of non-performance in civil case of temporary court security. A perfect chain, however, ultimately allows for a no-doubt verdict in a criminal case, or a conviction-based verdict in a civil case.

7. RETROGRADE ANALYSIS IN THE LEGAL FIELD

When introducing the topic, it is unnecessary to strictly differentiate between legal fields. Retrograde analysis provides identical tools whether dealing with criminal or civil cases, and the same holds true for other branches of law. The lawyer's task, subsequently, is to determine in which proceedings to pursue legal remedies, and this may involve multiple areas. Retrograde analysis should, in essence, collect the evidence upon which the lawyer can request the commencement of a judicial investigation or the submission of a lawsuit.

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The theoretical presentation of retrograde analysis will be outlined in three stages. This structure is determined by the way the legal expert operates, first examining the facts.

In the initial stage, the legal specialist encounters the compiled evidentiary material. Alternatively, they may only be faced with the resulting consequence for the aggrieved party. This refers to the phase where **the current state of facts** is established.

Upon identifying gaps in the cause-and-effect chain (EPV₁₋₃), the legal expert poses a question (EPV₄) and seeks an answer (EPV₅). In terms of legal syllogism, they search for legally relevant facts that justify commencing

a criminal investigation or civil proceedings. This involves formulating the factual premise (Premise *Minor*) of a legal syllogism. In the second stage, the legal expert will be **seeking solutions** through the application of methods, techniques, and cognitive processes.

Once the facts are clarified, the legal premise (Premise *Major*) of the legal syllogism may be applied. In the third stage, the lawyer will be able **to propose solutions** by means of legal instruments.

7.1. First Step (Actual Facts)

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As an initial step, when planning the proceedings, the legal expert must establish their position on the actual facts. At this stage, the lawyer already considers what is required for a successful criminal or civil procedure.

After examining the documentation from current proceedings, private documents, data, and publicly available records from official registries, the lawyer will determine whether a crime has occurred. This process is guided by the legal characteristics of a criminal offence, allowing the lawyer to categorize the act accordingly. In relation to the legal grounds for liability for damages, the lawyer will seek the criteria for claiming compensation for material or non-material damage.

Only at this point will the lawyer draft a projection of criminal proceedings based on the established facts. They may conclude that the legal elements of a crime have not been proven, or that not all required elements or evidence for a specific legal classification are present. **Here, we pause to discuss the collection of evidence,** which is central to retrograde analysis in this context. Evidence subject to exclusion cannot be used for a final conviction and must be replaced by other admissible evidence, provided statutory grounds permit further collection. This presents a peculiar paradox: evidence is proposed for exclusion retrospectively, and further collection may no longer be feasible. Retrograde analysis may provide a means to identify and supplement missing evidence. In this process, the legal expert applies various methods, techniques, and cognitive strategies. The lawyer's work subsequently transitions into the second stage.

Similarly, the projection of litigation may reveal issues with the available evidence. Either the evidence fails to substantiate the claim, or no evidence is available at all. This again necessitates the gathering of further evidence. Without sufficient evidence at the time of filing the action, the case lacks a quorum, and a judgment cannot be rendered if the arguments and evidence, when viewed collectively, do not convince the judge of the existence of a legal basis. The timeliness of submitting evidence is a limitation in litigation. Where the facts remain unclear, further evidence must be provided. Retrograde analysis can provide a gradual route

backwards, tracing from the consequence to the evidence that underpins it, using cognitive processes such as selective induction and abduction. This work, too, leads the lawyer to the second stage.

The **completed first step** involves at least the following reasoning:

Layers of the first (I) stage:

- I.1. Current state of facts
- I.2. Existence of a criminal offence
- I.3. Existence of a legal basis for damages
- I.4. Projection of criminal proceedings
- I.5. Projection of litigation
- I.6. Solution

7.2. Second Step (Finding Solutions)

At this stage, a legal expert undertakes a retrograde analysis (as suggested in the first step). In criminal law, this process begins with the traces left by crime, whereas in civil law, it starts from establishing the existence of a

consequence. In both areas, knowledge is derived from the objective imprint of the act, which is evidenced by the traces it leaves behind.

One indication is the consequence itself, such as damage resulting from a criminal offence or a tort.

However, the consequence alone does not demonstrate how the crime was committed or the way the damage occurred.

If there are additional circumstances surrounding the conduct, selective induction can be used within retrograde analysis to investigate further.

If only the consequence is known, retrograde analysis must rely on the abductive method of reasoning. This approach is highly speculative and does not always guarantee a successful outcome.

7.2.1. Traces of the Crime

Through his actions, the perpetrator leaves behind both subjective and objective traces of the crime. In this article, our attention is primarily on objective traces. From the objective imprint of the act—that is, the trace left by the crime, the legal expert constructs a cause-and-effect chain. If (existing) evidence is available, the expert

can, using inductive reasoning, uncover the facts and determine how the legally protected interests (criminally protected goods) were violated. In such cases, identifying the decisive circumstance is straightforward (EPV₃).

For instance, if the evidence is not immediately available, retrograde analysis is employed. This method takes us from the consequence back along the inductive pathway, where the legal expert seeks to identify what is missing. The expert attempts to fill this gap by applying the cognitive process of selective induction. A selective indicator guides the expert through concealed facts towards the evidence. Both the consequence and individual traces of the crime (EPV₁₋₃) serve as selective indicators.

Using the cognitive process of selective induction, it is possible to identify the decisive circumstance from among many others, specifically through the selective indicator. This approach bridges the missing link in the cause-and-effect chain within the field of induction. The investigator will then know where to look for the missing evidence, as the perpetrator has left a trace of the crime. If this cognitive process does not yield results (for example, if there is no trace or the circumstances necessary for selective induction are not sufficiently clarified), it becomes necessary to rely on the process of abduction. Here, we infer actions by proposing a hypothesis about a hypothesis, using probabilistic reasoning.

In more complex cases, where traces of the crime are not present (that is, not even covertly so), inductive inference alone will not suffice. In such instances, there is no trace of the crime to work from, making it only hypothetical to conclude whether a crime has occurred at all. This involves the formulation of working hypotheses.

7.2.1.1. Conclusion

The solution required in criminal proceedings where incriminating evidence is lacking (including situations involving the exclusion of illegal evidence) is the search for evidence.

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If existing evidence is available, the factual situation is clear, allowing us to construct a path from effect to cause through straightforward inductive reasoning. When the facts are hidden but several circumstances are present, it is necessary to identify the decisive one to uncover proof. This cognitive process is referred to as selective induction. The most challenging situation arises when only the consequence is known and preliminary conclusions about its origin must be drawn (inference by formulating a hypothesis about another hypothesis). This approach represents the cognitive process of abduction.

After completing the **second step**, it is necessary to provide decisive circumstances that are to be considered

legally significant facts constituting the elements of the offense (*Premise Minor*). At this point, the legal expert has the facts of the crime available and can apply legal instruments. From these facts, the legal expert will accurately summarize the legal characteristics of the crime that are proven by admissible evidence and thereby establish the correct legal qualification of the offense.

7.2.2. Inference as to the Injurious Consequence

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Reasoning regarding the consequence of damage aligns with the concept of liability for damages. The progression of damage traces back from the injured party (the origin of the damage) to the resulting damage. However, this article aims to explore the reverse direction: moving from the consequences of the damage back to the occurrence of the damage and the responsible party. This is feasible when objective traces of the damaging event are available.

We can substantiate this discussion by referencing the elements of liability for damages (damaging act, damage, causation, and liability). It should be noted that retrograde analysis does not directly address liability.

Otherwise, the question may arise as to whether objective and subjective elements are intertwined, even though they can support one another. This represents a fundamentally complex legal matter from its inception to its conclusion (EPV₁₋₆). When considering the standard of professional diligence or the due care expected from a competent professional, as well as when establishing negligence, objective factors can help us grasp the presumption of liability. Causation also involves subjective aspects, linking responsibility to conduct. As regards the occurrence of the damage itself (i.e., presumption of a damaging act), retrograde analysis as discussed here is entirely applicable.

Furthermore, this discussion can be justified by differentiating between simple and complex cases. Simple cases, which already contain all the prerequisites for liability, do not present any particular challenge. This article will not address the construction of a cognitive sequence in situations where all evidence is available or where the manner of damage occurrence is clear.

The situation changes when only the consequence and not all circumstances of the damage event are known, which makes the case more difficult. The missing circumstances can be reconstructed using the cognitive process of selective induction.

In cases where only the consequence is known and the circumstances surrounding the damage event are not provided, it is necessary to identify these circumstances by proposing a hypothesis about another hypothesis.

Conclusions are drawn regarding each individual circumstance, employing the method of abductive reasoning. This is done to verify the circumstance, as only a verified circumstance can be considered decisive (EPV₃). Abduction is used to clarify the occurrence of a damaging event when the cause of the damage is unknown. These are the most complex factual and legal cases.

7.2.2.1. Thought Processes and the Search for Evidence

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Up to this point, we can conclude that the cognitive process of retrograde analysis enables us to seek evidence. We begin with the assumption that the injured party has a weak evidentiary and argumentative foundation. To make the discussion even more engaging, let us add the scenario where the injured party has already initiated legal proceedings and is now a litigant. In such cases, it becomes essential to ensure the completeness of both the assertions (ZPV₁) and the evidence (ZPV₂). The principle that assertions and evidence must form a unified whole is supported by the rules of quorum and preclusion. The quorum rule demands a thorough base of arguments and proof (EPV₄), failing which the claim will be dismissed. Likewise,

preclusion requires consistency, as arguments and evidence that do not consider *ius novorum* (EPV₄) may be excluded by the court.

Example 1

A litigant may err or act negligently when submitting a lawsuit and omit crucial evidence. A legal expert will be able to provide a solution, applying the cognitive process of induction, beginning from the desired outcome (the claim) and retrospectively examining the available evidence. In doing so, they must adhere to the rules of preclusion, particularly if the initial hearing has already taken place.

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Example 2

If the litigant indicates the direction of his argument and evidentiary basis, the law expert may try to find the decisive circumstances from the evidence presented in the file, through selective induction. In doing so, it considers the preclusion.

Example 3

Conversely, if the litigant provides general statements and evidence that meet the requirement of the action's finality, this presents the broadest scope for a legal

expert's engagement. Should the expert determine that the client's conclusions are wholly incorrect, they can establish a new causal chain through the process of abduction. This situation arises when the foundation of evidence and argument is wrongly constructed in pursuit of the intended objective. If the consequence (for instance, the occurrence of damage) is known—which is typical—but the manner in which the damage arose is incorrectly identified because a primary element (such as a right, circumstance, or the beginning of the causal chain) has been wrongly selected, the legal expert can commence the causal chain from the second primary element. By employing the “hypothesis of a hypothesis,” the expert locates the decisive circumstance that identifies the correct path (chain). Where there is a sufficiently comprehensive base of assertions and evidence, it may even be possible to substitute the primary element.

7.2.2.2. Conclusion

A legal expert employs various methods, techniques, and ways of thinking to find solutions, all aimed at establishing the indisputability of the circumstance. Indisputability enables the use of an effective lower premise (*Premise Minor*) within a legal syllogism, thereby

allowing consideration of legal remedies (*Premise Major*).

The **completed second step** involves at least the following reasoning:

The way the consequence (damage) occurred forms a chain of cause and effect that must provide evidence for the claims, ensuring the chain is continuous. If a legal expert can bridge any missing links in this chain (using induction) through selective induction, it indicates that other circumstances were available at the time the consequence took place, i.e., when the damage occurred.

However, if we do not know how the damage occurred and who caused it, it is necessary to draw conclusions about the act. If the indisputable circumstance in selective induction is to be found by filling the link in the chain, however, the work of the law expert in abduction is inappropriately more demanding. It is necessary to find the elements that consist of the circumstances that lead to the resulting consequence (damage). Only such a circumstance can be indisputable, since a chain of confirmed conclusions is given.

From the range of indisputable circumstances, the legal expert selects the decisive one, poses a complex legal question (EPV₄), and seeks a solution (EPV₅). This means the legal expert must first establish the facts through abduction (the first step) before seeking solutions (ZPV₅), which constitutes the second step of retrograde analysis. The third step is the answer (legal syllogism), referred to

as EPV₆. The decisive circumstance is regarded as that legally significant fact which is fulfilled by the facts of the injury (Premise Minor).

At this stage, the legal expert possesses the actual details of the damage (its cause, course, responsible party, and victim) and can utilise legal instruments. The expert will accurately summarise the injury allegations based on the facts and present evidence as a complete unit (ZVP₁₋₂). They will also be able to identify a suitable legal basis (ZVP₃), which forms a legal syllogism (EPV₆), thereby initiating the third step.

7.2.3. Scheme of the Second Step

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Structure of the second (II) step:

II.1. Retrograde analysis in criminal proceedings

II.2. Objective traces of the criminal act (selective induction)

II.3. Inference concerning the act (hypothesis of hypothesis)

II.4. Evidence, legal elements of the offence, correct legal classification of the offence

II.5. Retrograde analysis in civil proceedings

II.6. Unbroken cause-and-effect chain (selective induction)

II.7. Undisputed circumstance (hypothesis of hypothesis)

II.8. Claims (assertions), evidence and legal grounds

7.3. Third Step (Solutions Offered)

The third step takes place after a logical and preliminary phase devoted to finding solutions. In the previous step, solutions were proposed using the cognitive technique of retrograde analysis. Inductive reasoning identified crucial evidence within the extensive range of collected data and information. Selective induction bridged the gap in the sequence by means of an indicator. Meanwhile, abduction allowed us to deduce the nature of the damage and the responsible party through consideration of the consequences.

Based on the evidence obtained, a legal expert can also propose specific legal instruments.

We will present these legal instruments separately for the criminal and civil domains.

7.3.1. Criminal Complaint

By employing the method of selective induction, the legal expert uncovered the missing circumstance that had been hidden, thereby enabling the identification of the crime with the relevant legal characteristics.

It must provide adequate (sufficient) grounds to suspect that a criminal offence has occurred.

An erroneous legal classification of the offence may result in the discontinuation of prosecution. Therefore, when determining the legal qualification, it is necessary to rely on circumstances that have already been proven. Naturally, further evidence gathering (including the supplementation of the criminal complaint) may broaden the scope of legal classification.

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7.3.2. Supplementing the Criminal Complaint

The supplementation of a criminal complaint expands the possibility for alternative legal classification.

The second aim made possible by supplementing a criminal complaint is the attainment of a higher standard

of substantive truth, reaching the level of reasonable grounds for suspecting a crime has been committed.

Both objectives are facilitated by the process of selective induction, which uncovers and presents new circumstances that corroborate the chain of causality in events.

In certain cases, evidence can only be obtained if a sufficient threshold for the existence of a crime is met. By presenting law enforcement authorities with a situation that is verified by data and supported by evidence, the opportunity for implementing covert measures becomes available.

It is important to emphasise the legality of evidence collection by law enforcement agencies. Where concerns are raised, the circumstances of the crime may be proven by alternative forms of evidence.

The newly gathered evidence brings new legal characteristics and enables alternative legal qualifications.

7.3.3. Evidentiary Motion in Criminal Proceedings

Once legal proceedings have begun, the utility of selective induction diminishes, as it is necessary to demonstrate reasonable suspicion of a criminal offence to launch a judicial criminal investigation. However, if such an investigation is not initiated, selective induction may assist in identifying the relevant circumstances and evidence to substantiate reasonable suspicion.

The purpose of an evidentiary motion in criminal proceedings is to further confirm incriminating legal elements and final legal qualification, enabling a verdict beyond reasonable doubt. Its role is to reinforce the existing cause-and-effect chain established by the indictment's validity. It should be noted that the cognitive process of selective induction aims at objective evidence and is not intended to demonstrate intent; while selective induction may contribute to proving intent, it cannot do so independently.

If the circumstances of the crime remain insufficiently clarified after the indictment becomes final, this situation benefits only the defence, not the prosecution.

This gives rise to the issue of excluding evidence on the basis of illegality. In order to replace excluded evidence, the cognitive process of abduction can be utilised. Abduction seeks to establish a cause-and-effect chain

using different primary elements, distinct from those found in existing, typically illegally obtained circumstances and evidence. This makes possible to collect evidence that are not part of the illicit chain, by law enforcement agencies.

7.3.4. Issuance of an Interim Injunction in Tort Law

The assessment of damages is addressed within the scope of tort law. When the evidence provided supports all presumptions necessary for establishing liability for damages, the conclusion follows straightforwardly, based on inductive-deductive reasoning. Therefore, if we seek the issuance of a temporary injunction with supporting evidence, the process is uncomplicated. The situation changes, however, when the collection of evidence is still in its early stages. This paper will further illustrate such an example.

The issuance of an interim injunction relies on probabilistic criteria, serving as a preliminary phase in establishing the material truth of litigation. In addition to having an existing claim and a risk, it is also necessary to demonstrate an ongoing cause-and-effect chain, all according to the probability standard.

If we touch on the continuous cause-and-effect chain in more detail, we can conclude that the chain refers to the existence of a claim and a threat, and these assumptions are connected to each other by continuous conclusions. The probability criterion can also be achieved through a more speculative thought process, such as abduction. Abduction is based on a probabilistic inference, which should be finally confirmed by a continuous cause-and-effect chain. This logical chain is only provisional in the interim injunction procedure, as is apparent from the very title of the institute, and is valid only until a court decision is issued. If the judgment is refused, then the continuous chain of conclusions (in the part of the existence of the claim) is not confirmed, which means that the abduction did not offer the correct solution. In the event of an upholding judgment, however, the chain of decisions (again in the part of the existence of the claim) is fully confirmed. We can conclude that retrograde analysis refers only to inferring the existence of a claim when the consequence already exists. However, the question of how to act in the future, i.e. as regards the obstacles to the fulfilment of the claim, does not constitute a retrograde analysis, since the consequence does not yet exist. Nevertheless, for the existence of a risk of fulfilment of a claim, a cognitive process of hypothesis on a probabilistic basis can be used, that is immanent to abductive reasoning, which applies only if all the conclusions in the chain are confirmed.

7.3.5. Securing of Evidence

Even in the case of securing evidence, the law expert starts from the assumption that not all the assumptions of liability for damages have been made and that we are only at the stage of gathering evidence.

Therefore, the legislation of some countries, requires proof of the existence of a legal interest in taking evidence. Of course, the question arises as to whether every single evidence proposed must then be taken. However, the argumentative and evidentiary basis of lawsuit must be based on certain criteria.

Theorists discuss the criterion of legal interest in this regard.

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Well-founded concern that the proof could not be carried out, is a circumstance in the future. This is not a retrograde analysis, as conclusions are drawn about the consequences in the future. Nevertheless, the hypothesis is entirely immanent to the abductive mode of reasoning. Thus, the abductive hypothesis that the proof was made out of well-founded concern may never be confirmed (the perpetual hypothesis).

However, we can discuss the continuous cause-and-effect chain between facts and evidence. When the assertions are supported by evidence to which to protect.

7.3.6. Lawsuit, Opposite lawsuit and Offset Proposition

The culmination of the dispute criterion is reached in court proceedings when the judge delivers a ruling. The circumstances must be undisputed between the parties, and the court's reasoning must attain the level of provable facts – that is, material truth. The consistency of arguments and evidence, which has been described repeatedly, must be demonstrated and should achieve complete harmony, or wholeness, upon the issuing of a judgment.

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For the court to determine that a particular fact has been proven, there must be no space left for hypothetical reasoning based on a chain of suppositions. The judgement must rely solely on inductive-deductive logic.

Nevertheless, there is no restriction that the line of undisputed circumstances and judicial reasoning cannot be reached beforehand through the collection of evidence, which may be based on cognitive processes such as selective induction and abduction.

Therefore, the search for evidence in judicial proceedings may also be based upon hypothetical premises, all with the aim of clarifying the facts of the case. If the circumstances between the litigants have not been

established as undisputed, it is necessary to persuade the judge with arguments that the facts exist and are properly proven.

It is also essential to satisfy the criterion of the permissible collection of evidence (*ius novorum*), which poses a barrier to the unrestricted use of cognitive thought processes.

7.3.7. Scheme of the Third Step

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Layers of the third (III) step:

III.1. Criminal complaint

III.2. Supplement to the criminal complaint

III.3. Motion for evidence in criminal proceedings

III.4. Issuing an interim injunction in tort law

III.5. Securing of evidence

III.6. Lawsuit, opposite lawsuit and offset preposition

8. CONFIRMATION/REBUTTAL OF THE THESIS

During our research, we have confirmed that from the objective trace of an criminal act, through retrograde analysis, we can reason from the consequence of an criminal act backwards, all the way to its origin. In the civil field, we conclude about the damage consequence. In both cases, cognitive processes are used to fill in the missing gaps, either from the beginning (abduction) or during the course of events (selective induction). In the case where we cannot confirm the cause-and-effect chain, objective traces do not offer sufficient guidance. The thesis put forward in this section does not stand up to scrutiny. Nevertheless, this conclusion should be made with reservation, as the traces may have been destroyed. If it is human (intentional) conduct, it is possible to build a further chain. It is indisputable, however, that the court needs a continuous chain of cause and effect to adjudicate. Only continuous chain offers him a clarified lower premise that he can implement a legal syllogism.

9. CONCLUSION

Retrograde analysis in law means looking for the circumstances of the minor premise to clarify the facts to such an extent that the legal syllogism procedure no longer poses a problem. However, in building a historical event back from consequence, it is necessary to submit to legal limits. A law expert must follow the rules of lawful collection of evidence in criminal matters or the rules of presenting new facts and evidence in litigation. This makes retrograde analysis in law something special.

Law expert must formulate its own methods, techniques, and thought processes in order to be able to offer useful (read legitimate) evidence that enables the successful initiation, continuation, and completion of the process. He confronts the cognitive processes of induction, selective induction, and abduction with the limitations of judicial proceedings.

I do not think it is unreasonable to make an assertion that the use of cognitive processes and the limits of judicial proceedings raise several new, original juristic questions that need their own branch of jurisprudence. Retrograde analysis in law certainly boasts originality.

An instrument that guides the solution of complex legal issues but also connects theory with practice.