

The Result and its Causal Explanation in Criminal Law
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I. Introduction

863 Just in the field of causality, which is the first and seemingly most clear step to establish objective imputation of an injury to the act of a person, we sometimes have a sure intuitive judgement whether a certain act is causal or not, but this judgement contradicts the result to which the generally accepted rules for the determination of causality leads, namely the but for-rule, condition sine qua non.

That's where the famous executioner-case by Engisch belongs. The father of the victim, who was invited to the execution of the murderer, pushed aside the executioner and pressed the button which releases the trap door under the gallows. We intuitively acknowledge that the father and not the executioner caused the death of the murderer. But the formula of the necessary condition (but for-rule) leads to the result that the act of the father was not necessary at all for the death of the murderer, for if he wouldn't have pressed the button, the executioner would have done it in the very same moment and the murderer would have died in the very same way.

A craftsman who made a thing which afterwards was destroyed by another person surely caused a necessary condition for the destruction of this thing, but no one would hold him responsible for this property damage.

Or let's take another example from Samson which is widely discussed in Germany: a train is running on one of two tracks which both are buried by a landslide, and a switchman, for whatever motive, directs the train to the other track. There is no reason to make the switchman responsible for the death of the passengers in this train, but the prevailing opinion in Germany regards him to be responsible for the result, because according to this opinion, one has to ask for the causation of the result in its concrete shape, and the exact spot where the collision took place belongs to this concrete shape. Another consequence of the idea of the result in its concrete shape is that the person who weakens another one's blow against the head of the victim is responsible for the injury in its concrete shape. The same would hold for the one who persuades a robber to refrain from carrying a weapon. According to the idea of the result in its concrete shape, this person is causal for the robbery in its concrete shape, namely without a weapon.

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Of course, these are very strange cases, which belong to the in Germany so called “Lehrbuchkriminalität” (...), and even if they would take place once, they will never find their way into a courtroom. In spite of this, we should not simply dismiss them as some sophisticated inventions of criminal scholars, because these cases show that our generally accepted method of determining causation, namely the but for-rule, sometimes leads to unacceptable results which are very difficult to correct in later stages by vague correcting criteria like social adequacy or such an extraordinary mean like necessity. These examples show that there are fundamental errors in our ways of determining causation. But what is even more troubling is the certainty with which scholars as well as laymen come to the same conclusion in these cases which contradict the results of the but for-rule, while these conclusions are meant to be nothing more than statements about causation.

This shows that in some cases, law scholars as well as laymen use other rules to determine causation than they usually pretend to use. So until now, criminal science has not succeeded in formulating the rules to determine causation correctly and completely.

We now will try to take a step forward in this task. So it is not the goal of the following considerations to propose and justify new results but to find a better formulation of the rules we really obey when we determine causation and objective imputation for a criminal relevant result to a person's act. We can use for this purpose the acknowledgements of the philosophy of science, which deals with the problems of causation, causal laws and causal explanations in the empirical sciences, but we shouldn't expect that they will offer to us the solutions of the specific problems which occur if we use causation to justify objective imputation of a single result to the act of a single person. Lawyers and law scholars have different problems with the concept of causation than physicists or astronomers. The same applies to the philosophy of science.

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For a physicist, the explanation of causality serves as a mean to discover and test natural laws. Though the astronomer is more interested in single events, it is also his goal to explain these events using natural laws. For the lawyer, however, it is of great importance to be able to decide whether to include a certain circumstance, namely the act of a person, into the explanation of a damage or not. The lawyer needs a lot of criteria to decide this which are of no interest to scientists. The lawyer asks, for example, "How far back in the past do I need to follow a causal chain of events?" "As far as possible" would be the answer of the astronomer. The lawyer wants to know "How fine grained shall I describe the result which is to be explained and which circumstances instantiated in the special case belong to the result in its concrete form?" "You can describe any event, just as you want, and I will tell you what its causes are", answers the scientist. The lawyer asks, "How exact should I determine the quantitative data in the description of a result and of its causes?" "As exact as possible", is the answer of the natural scientist. "Everything else would be sloppy work." The lawyer continues, "How can I discern between one natural law and the other in order to decide which is the correct natural law applied to a causal process which has happened?" "I don't understand the question", replies the physicist. "You can formulate causal laws as well as single circumstances just as you like, as long as they are true." The lawyer inquires, "When is a causal explanation complete, so that I can be sure not to have left out any cause or taken the wrong cause?" "Never", says the physicist.

II. Necessary and Sufficient Conditions

The *first difficulty* that we come across when trying to qualify a human act as being the cause for a result is that this act alone is never enough to cause the result, which means it is not a *sufficient* condition for the result. If we were to determine the cause to be a sufficient condition for the result (which it would then naturally have to be true, because it would otherwise be a hypothetical cause, at best) then a human act can be a part of the cause, at best. **866** We can try to isolate this act by labelling all of the other antecedent circumstances of the result as being given and then ask if the act is a sufficient condition. However, when doing this, we immediately come across the next difficulty. By following this method, every random act can be considered as being a part of the cause of every result, under the condition that they both actually occurred, at least when we understand the expression sufficient condition as an extensive implication, which would mean accepting that: **p** is a sufficient condition for **q** when the sentence applies, "if **p**, then **q**." This sentence is always true if both **p**, as well as, **q**

are true.¹ One would immediately object that more is meant with the “sufficient condition” than the implication “if..., then...” expresses. That is, that it expresses more than only a declarative about the possible truth value combinations of two sentences. A condition is sufficient if I can predict the certainty of the result based on these conditions. This is possible if a general sentence or law exists according to which if a situation of the **p** type is given, a situation of the **q** type is sure to follow. But such a generalized sentence always exists, provided that the validity of the causality principle is given, for every result that actually occurred and every act that was actually carried out. Because when the result **E** actually occurs, it is given that any sufficient conditions for **E** were instantiated. Then there are the conditions **q, r, s**, etc. and a generalized sentence: “Always if conditions **q, r, s**, etc. are instantiated, **e** occurs.” If the act, **867** whose causality is to be tested, belongs to these conditions, then it is proven to be causal through this law. But, if it does not belong to it, I can deduce the following sentence: “If **q, r, s**, etc. and **v**, then **e**,” whereby **v** stands for the act, but can also represent any other arbitrary fact. When a sentence describes a condition to be sufficient for some result according to a generalized law, then so does every other sentence containing this sufficient condition and any other fact. The requirement to be a component of a sufficient condition is clearly too weak to serve as an explication of the causality of an act.

It seems better to say that the act has to be a *necessary* condition of the result, so that the sentence, “Only if **v**, then also **e**” or, “No **e** without **v**,” would be valid. Though, even this cannot be interpreted to be a mere statement about the individual case, because for that situation in question it is already clear that both **v**, as well as, **e** are true and therefore the sentence, “only if **e**, then **v**” is true, too, even if there is no other relevant connection between **e** and **v**. So “only when **e**, then **v**” is also to be understood as a general law that deals with types of acts and results under which the act and result in question can be subsumed. The requirement of the necessary condition in this sense has the advantage that the act in question can be isolated from the remaining antecedents from the beginning of the analysis. And there is no danger that any arbitrary occurrence, perhaps an act of a person, can be included in this law through conjection, because when “no **p** without **q**” is valid, then it is not the consequence that “no **p** without (**q** and **v**)” is valid, too. **868**

One can also explain the difference between necessary and sufficient conditions thus: The law that indicates a sufficient condition for the result (always if **q**, then **e**), allows for a conclusion to be made from the condition to the result. If the result is chronologically after the condition, it can serve as a prediction. What can be predicted from the logically weaker sentence **q** can also be predicted from the stronger sentence, “**q** and **v**.” The law, that a necessary condition gives (only when **q** then **e**), allows for a conclusion from the result to the condition, i.e. a retro-diction, if **e** occurs chronologically later. The necessary condition is therefore the inversion of the sufficient condition.² But, if **q** results from **e**, the logical stronger sentence “**q** and **v**” does not.

¹ The extensive Implication (if...,then...) is a truth sentence conditional in the propositional logic that simply means to show a certain dependency between the trueness or falseness of a sentence next to the trueness and falseness of two other sentences. This dependency relationship can be depicted in more detail in a Truth table:

P	Q	P → Q (= when p, then q)	
T	T	T	
T	F	F	(T= True)
F	T	T	(F= False = not true)
F	F	T	

That this table is correct is easily recognizable when one understands that the sentence, “if **p**, then **q**” does not state anything else than the sentence, “never non-**q** and **p**” or “no **p** without **q**.” Further reading to this see, *Klug, Juristische Logik*, 3rd Edition, 1960, pages 24 et. sec., especially pages 26 and 30.

² Compare perhaps *Klug* (footnote 4), pages 32 et. sec.

A further advantage of the necessary condition is that it suffices irrefutably for the fulfilment of the fundamental prerequisites of objective imputation. If it was dependent upon the act of a person, whether a damage occurred or not, that is reason enough to place the act together with the result in a preliminary imputation-affiliation test. If this affiliation can then be said to represent a causal relationship, or whatever else causality is, does not need to be further scrutinized.

But the requirement of the necessary condition has been shown as being logically too *strong*. It contains more than we are prepared to accept as a minimal prerequisite for causation and objective imputation. It leads primarily to the situation in which the existence of *pre-empted causes* cancels out the cause, itself. *Spendel* suggested prohibiting the inclusion of pre-empted causes when considering the hypothetical causal chain without the real cause.³ The question that then comes to mind is what the relationship between an act and result actually is when considering it from this aspect, since the act would neither be a necessary nor a sufficient condition for the result to have occurred. Above all, it is not possible to answer the question what would have happened without the real cause if you are not allowed to consider a pre-empted cause.

First of all we have to find out whether there is a pre-empted cause at all and what is the fact we are not allowed to consider when using the but for-rule. The but for-rule isn't helpful to fulfill this task, because according to the but for-rule, it makes no difference at all whether there is a pre-empted cause, a concurring cause (double or multiple causation) or whether the fact in question is no cause at all. So you need other rules in order to find out a pre-empted cause in the concrete case.

But even if you have found it out, you cannot just leave out the pre-empted cause when constructing the causal process which would have occurred without the fact in question, because this hypothetical causal process must follow the general causal laws, and according to the general causal law, the pre-empted cause will occur in this causal process. If you are not allowed to consider a pre-empted cause, you cannot at all answer the question how the causal process would have developed according to causal laws without the respective action. The only way to detect a pre-empted cause is to show that the causal chain which connects the pre-empted cause with the result was somehow pre-empted.

Let's take the following example.⁴ Two boys play soccer in front of a wall that symbolizes the goal. One of them makes a shot for the goal and the other one blocks the ball with his head while the ball deflects off and breaks through a store window. The head block was not a necessary condition for the destruction of the glass, because the ball would still have broken it, had it bounced off of the wall, instead. However, since the ball did not make contact with the wall, this situation must be seen as being a substitute cause. When I am putting the hypothetical chain of events together and eliminate the head block from the series and should not continue the scenario considering that the ball would have bounced off of the wall, how should I imagine the flight of the ball in order to obtain an answer to the question of whether or not the kick would have resulted in the breaking of the window without the head block having occurred?

Just as unacceptable is the order to only omit the act in question from the causal process without replacing it with something else that had not happened. Only if we imagine a counterfactual **870** progression of the chain of events without the act in question that would not have led to the result, we come to the conclusion that the act was a necessary condition for the result.

³ Compare *Spendel*, Die Kausalitätsformel der Bedingungstheorie für die Handlungsdelikte, Jur. Diss. Heidelberg 1947, page 38.

⁴ According to *E. A. Wolff*, Kausalität von Tun und Unterlassen, Eine strafrechtliche Untersuchung, 1965, page 22.

III. The Result “in its concrete form”

The majority opinion is attempting to eliminate the majority of pre-empted causes without giving up the Necessary Conditions Method by giving the instructions to only test the necessity for the result in its concrete form.⁵ The underlying principle for this is as follows: The more fine-grained a result is described, the fewer pre-empted causes are possible. If I were to describe the result of § 212 StGB (manslaughter) as a certain person having died, then I would never find an act that would be a necessary condition of that result, whether or not the person had been killed. The fact that the person would eventually die sometime and someplace is clear, according to natural laws and rules of experience. The group of pre-empted causes **871** will continue to shrink as I add more and more details to the result. For example: By including the time of death, place of death, or manner of death like strangulation, having bled to death, heart attack, etc.

But this process of eliminating pre-empted causes assumes that I can discern which details belong to the result in its concrete form and which do not, and that I can justify these differentiations and this description of the result. The consequence of this determination of the result will be that anyone who is causal for any detail of this description will be held causal for the result as a whole.

The switchman, who redirects a train from a track that has been destroyed by a landslide onto another track, which has also been destroyed by the same landslide is attributed as having caused the killing and wounding of the passengers, because he set a necessary condition for the place of death (not for the death itself).⁶ He who turns a chest around in a burning room is supposed to be causal for the property damage in its concrete form, because the flames burned a different side of the chest first.⁷ To the advocates of the doctrine of the damage in its concrete form, such results appear as unavoidable consequences of a neutral analysis of causation. They are however, only the consequences of a certain description of the result.

What exactly belongs to the *result* in its concrete form and how it is to be constituted has hardly been analysed since the ‘result in its concrete form’ doctrine has been accepted. All of the details in which “the type of result of the crime in question in the specific situation”⁸ appears are supposed to belong to the result in its concrete form. The separation

⁵ As seen by the present majority opinion; compare Franz von Liszt, Lehrbuch des Deutschen Strafrechts, 26th edition 1932, pages 157 et seq.; Maurach/Zipf, Strafrecht, Allgemeiner Teil, Teilband 1, 5th edition 1977, page 258; Schmidhäuser, Strafrecht, Allgemeiner Teil, 2nd Edition 1975, 8/56; Jescheck, Lehrbuch des Strafrechts, Allgemeiner Teil, 3rd Edition 1978, page 227; Welzel, Das deutsche Strafrecht, 11th edition 1969, page 43; Baumann, Strafrecht, Allgemeiner Teil, 8th Edition 1977, page 224; Blei, Strafrecht I, Allgemeiner Teil, 17th Edition 1977, pages 76 et seq.; Wessels, Strafrecht, Allgemeiner Teil, 9th Edition 1979, page 36; Schönke/Schröder/Lenckner, StGB 20th Edition 1980, vor § 13 Anmerkung 73, 75; Rudolphi, Systematischer Kommentar, 2nd Edition 1977, vor § 1 para. 39, 41; Heimann-Troisien, Leipziger Kommentar, 9th Edition 1974, Einleitung, para. 91; exceptionally defined by Mezger, Strafrecht I, Allgemeiner Teil, 9th Edition 1960, page 68; Schlüchter, Grundfälle zur Lehre von der Kausalität, JuS 1976, 518; Gmür, Der Kausalzusammenhang in der zivilrechtlichen Rechtsprechung des schweizerischen Bundesgerichts und der Kausalzusammenhang im Strafrecht, Jur. Diss. Zürich 1926, pages 44 et seq.; Samson, Hypothetische Kausalverläufe im Strafrecht, Zugleich ein Beitrag zur Kausalität der Beihilfe, 1972, pages 30 et seq., 86 et seq.; *idem*, Die Kausalität der Beihilfe, in: Festschrift für Peters, 1974, pages 121 et seq.; fundamentally alike is Engisch, Die Kausalität als Merkmal der strafrechtlichen Tatbestände, 1931, pages 9 et seq.; Schaffstein, Das Risiko als objektrives Zurechnungsprinzip im Strafrecht, insbesondere bei der Beihilfe, in: Festschrift für Honig, 1970, pages 173 et seq., 176. As far as all of the authors dismiss the Necessary Conditions Formula, none of their critique is directed towards the formula serving as an explanation for causality or against the significance of the result “in its concrete form.”

⁶ Cf. Samson, Hypothetische Kausalverläufe (10th Footnote), pages 98, et seq.

⁷ Cf. Samson (10th footnote), page 88 et seq.

⁸ Max Ludwig Müller, Die Bedeutung des Kausalzusammenhangs im Straf- und Schadensersatzrecht, 1912, page 11; Engisch (10th footnote), page 11.

of the result from other true circumstances is made by selecting certain facts out of the situation. Assuming that these facts **872** are provided in “concrete definitiveness”.⁹ Even the doctrine of the relevance of abstract descriptions of the damage accepts the idea that every fact is first given to us in a concrete shape and that we have to figure out the relevant elements of this concrete shape by abstraction from this concrete shape.¹⁰ If it appears that such an abstraction creates or at least aggravates the problem to eliminate pre-empted causes by removing some pre-supplied elements of the concrete shape, thus increasing the number of potential pre-empted causes, one would simply return to the concrete shape. It was for this reason that the ‘result in its concrete form’ doctrine was able to swiftly and completely dominate the so-called doctrine of the relevance of abstract descriptions of the damage and maintain its superior position until now.¹¹

But that the “facts” are already provided in a defined concrete shape was the shared error of both theories and this error prevents the proponents of the Abstract Theory from recognizing its strengths and the Theory of the Concrete Form from recognizing its weakness. What we recapitulate from a description into a sentence and thereby into a fact is arbitrary. Reality just decides whether the sentences we created are true or false, describing either a fact or fiction. We thus can, depending on how we formulate the sentences describing the result, theoretically make any true circumstance part of the result in its concrete shape. Following this method, one could theoretically **873** point out every person that somehow had an effect on their environment as being in a causal relationship for every result.

Since *Engisch’s* works, the following situation is believed to be solved, using the theory of the concrete result: An artist paints a vase, which another person shatters, so that painted fragments of the vase are lying on the ground instead of white ones. Should the artist be held as being causal for the property damage in its concrete form? *Engisch* denies this, because the fact that the vase was painted does not belong to the property damage.¹² How about the fact that a painted vase burst? On the other hand, the hit to the side of the victim’s head is supposed to belong to the concrete result of a homicide, so that the person whose shout made the victim turn his head is causal for the result in its concrete form, because otherwise, the hit would have been to the back of the victim’s head.¹³ But why does the exact location of the wound have to be included in the description of the result in its concrete form? I could just as well describe the result with a sentence that doesn’t contain the exact location of the wound. For example: “The victim died from a head wound that caused a skull fracture.” Based on this description of the result, the shout from the other person would not be a necessary condition, the person who shouted would not be causal for the death.

There is no concrete shape of a result at all. The propagators of the condition sine qua non could decide which circumstances they put into the description of a “concrete shape” using it for a vicious circle by taking just those details into the description of the concrete shape for which a person whom they want to regard as causal for the whole result has provided a necessary condition.¹⁴

⁹ *Müller* (13th Footnote), pages 11 et seq.; *Engisch* (10th Footnote), page 19 et seq. The final assertion of the significance of the “result in its concrete form” doctrine is traceable back to these two authors; cf. *Samson* (10th footnote), pages 29 et seq.

¹⁰ Because the necessity of the abstraction is justified in that “the result in its complete concrete definiteness” doesn’t even interest the jurist.” (accentuation by the author) cf. *Traeger*, *Der Kausalbegriff im Straf- und Zivilrecht*, 1904, page 41; *Tarnowski*, *Die systematische Bedeutung der adäquaten Kausalitätstheorie für den Aufbau des Verbrechensbegriffs*, 1927, page 38.

¹¹ Cf. the supporting evidence in the 10th and 14th Footnotes and the historical synopsis by *Samson* (10th and 11th footnotes), pages 26 et seq.

¹² Cf. *Engisch* (10th footnote), page 11 et seq.; *Samson* (10th and 11th footnotes), page 30.

¹³ Cf. *Engisch* (10th footnote), page 11; *Müller* (13th Footnote), page 12.

¹⁴ This is especially clear in *Erich Hartmann’s*, *Das Kausalitätsproblem im Strafrecht mit besonderer Berücksichtigung des Usachenbegriffs des Strafgesetzbuches*, 1900, page 76. „...it is sufficient when one of the events that is unmistakably connected to the result would not have occurred, had the act not occurred..., or stated

Engisch has already shown this vicious circle for certain extreme cases. He explains this using the executioner case. **874** In this situation, there is nothing that differentiates the actual result as it occurred from the result that would have occurred without the father's interference, because in that case the executioner would have pushed the button. *Engisch* resumes, that a difference between the two results can only be made by including preliminary stages of the causal process, to which belong that in the real case it was the father, in the hypothetical version it would have been the executioner who released the trap door. But this approach's reasoning is deemed circular, since it already presupposes that the act of the father is causal, which is what it is trying to prove. The fact that the convict was killed by the father, is exactly the reason why his pushing of the release button is included in the description of the concrete result as a preliminary event.¹⁵

However, *Engisch* did not acknowledge that he had stumbled upon a problem that every definition of the concrete result encounters. He only drew the consequence that in cases where one, by omitting the perpetrator's act which one intuitively recognized as being causal, does not get a difference in the "concrete result", it is not allowed to look for this difference in the result's development.¹⁶

IV. The causal explanation of a result

Even though *Engisch* clings to the "result in its concrete determination" as the starting point of determining causality, these extreme cases served him as a reason to suggest a different procedure for determining and distinguishing causes, which would also exclude the pre-empted causes in these supposedly extreme cases. This is the application of strict natural sciences and the concept of non-metaphysical causation determined by the philosophy of science. Causation is a "lawful condition of the result."¹⁷ Reformulated in scientific terms: Every component of a causal explanation of the result. The causal explanation of a single occurrence is given by a causal law, under which the occurrence is subsumed as being a result with certain antecedents that were actually instantiated. Schematically presented: **875** A general sentence is given in the form of: If the conditions **p, q, r,...**, are given, then **e** always occurs (symbolically **p, q, r,...x→e**) and in the single case; conditions of the **p, q, r,...x** type are given, like **p₁, q₁, r₁...x₁**. Now, the result (**e**) is logically derived from both of these sentences according to the formula

$$\begin{array}{c} \mathbf{p, q, r, \dots x \rightarrow e} \\ \mathbf{p_1, q_1, r_1 \dots x_1} \\ \hline \mathbf{e} \end{array}$$

The conditions are so numerous that they cannot be completely counted, but every causal explanation in the practical field pre-sets a certain amount of implicit conditions, the *side conditions*, also called the causal field.¹⁸

The priceless advantage of this method is that it gets along with the facts of the case that are actually given and needs neither hypothetical results nor hypothetical antecedents to arrive at its conclusion. This leads to the automatic exclusion of pre-empted causes, since as

differently: An act is then causal, when the result would not have occurred at all, or would not have been able to occur *in the way* in which it actually did." (Emphasis added by the author).

¹⁵ Cf. *Engisch* (10th footnote), pages 15 et seq.

¹⁶ Cf. *Engisch* (10th footnote), page 16.

¹⁷ Cf. *Engisch* (10th footnote), pages 17 et seq., especially on page 21; *idem*, *Vom Weltbild des Juristen*, 2nd Edition 1965, pages 128 et seq.

¹⁸ Cf. The causation theory of singular occurrences by *Popper*, *Logik der Forschung*, 6th Edition 1976, pages 31 et seq.; *Carnap*, *Einführung in die Philosophie der Naturwissenschaft*, 3rd Edition 1976, pages 11 et seq.; *Stegmüller* (5th footnote), page 82; look also to *Phillips*, *Der Handlungsspielraum*, *Untersuchungen über das Verhältnis von Norm und Handlung im Strafrecht*, 1974, pages 101 et seq.

already stated, one recognizes pre-empted causes by discovering a part of the intermediary stages which would follow the pre-empted cause according to the laws of causation in order to arrive at result, as not instantiated. If the person who was poisoned with a lethal dosage was shot dead before the poison could take its effect, one is able to recognize that the poison was not the cause of death, because of the missing part of the poison's symptomatic deadly effect.

V. The sufficient minimal condition

But we have already encountered a problem with this method right from the start. Usually, laws of causation do not indicate necessary, but rather sufficient conditions. However, when I combine a sentence which describes a sufficient condition for the result with some random other sentence, then I get another sufficient condition. So how can I avoid including random facts of the case and therefore tying random acts of people into the causal explanation? **876** If this is not possible, the concept of a sufficient condition would produce nothing more than feigned reasoning for intuitively found results just like the 'concept of a necessary condition for the result in its concrete form'. A cause is obviously not every fact which is an element of some sufficient and true condition of the result. In a certain sense, a cause must be necessary for the explanation of the result. But, on the other hand, it would be too much if it were supposed to be a necessary condition of the result in the concrete case, because then every substitute cause would preclude the causality. The necessity belongs to the formulation of the causal law that will be used for the explanation. This law is not allowed to contain any superfluous elements. An element turns out to be superfluous if the law was still valid even without it. This is where the method of elimination belongs. This thinking-away, however, does not refer to the concrete case and absolutely not to another hypothetical one. It is not necessary or even allowed to mentally set something else into the place of the eliminated element in the causal law. By applying this law of causality to the individual case, which is the mere logical conclusion from a general sentence to a particular one, we have to strictly cling to the real facts. The only thing to do with the single case is to subsume it under the sufficient minimal condition expressed by a correctly formulated causal law.

VI. Overdetermined causation

With that, we have excluded those concurring causes which are not true. But how does it look regarding those that are true; in the cases of so-called overdetermined causation? Don't we get the same problems here as the *conditio-sine-qua-non* doctrine has in the same constellations? We also require that the cause is a component of a (sufficient) minimal condition and in so far is necessary for the explanation of the result. With overdetermined causation, however, neither of these two conditions, of which either is sufficient to explain the result, is necessary to explain the result. Not even the displacement of the necessity in the formulation of the causal law can help us here. In the admittedly artificial, but simple, example, in which someone were to drink a beverage to which two persons independently from each other added a lethal dosage of \underline{x} mg of strychnine, it is possible to apply the following natural law to explain the death: **877** If someone ingests $2 \underline{x}$ mg of strychnine, he dies. I then acknowledge that I have constructed sufficient condition for the death, but not a minimal one, because I can replace the statements " $2 \underline{x}$ mg" with just " \underline{x} mg" without it losing its validity. I do not necessarily need the act of the one or that of the other culprit in order to explain the result. I do, however certainly need one of them, which is the reason that both of them are causal in the sense of the sufficient minimum condition. I can pull at least two different sufficient minimum conditions out of the case that can be subsumed under the same causal law. They are both minimal conditions, because neither one of them contains all of the

components of the other. For this reason, this constellation is different from the case in which a superfluous component is initially included in the causal law.

After all, the matter of overdetermined causation shows that our rules of determining causes have not been completed yet. The statement that the result is explainable without a certain circumstance, i.e. that the causal law from which the result derives is still valid if the circumstance is eliminated, does not automatically mean that this circumstance is not one of the causes that determine the result. A cause is an overdetermined one, if I can replace a different piece of my explanation with it. I can identify that piece as a cause by eliminating it tentatively, as well, hence eliminating both of the causes in question. It then becomes obvious that the explanation doesn't work anymore. The way of correcting the but-for-rule¹⁹ by stating that two circumstances, which I can eliminate alternatively but not cumulatively without the explanation becoming invalid, are both causal, is objectively correct. It does not, however, comply with the requirement of a necessary condition and therefore is not acceptable on the sole basis of the but-for-rule. The Causal Explanation Theory is better capable of dealing with this problem.

Of course it won't be possible to solely rely on this method of alternatively eliminating circumstances in order to identify overdetermined causes in practice. Otherwise one would have to tentatively replace every circumstance, **878** which has shown to be unnecessary for the causal explanation, with every other circumstance which has shown to be unnecessary by itself, as well.

It should be also added that not only double causes, but also multiple causation is possible. For example, the fatal shots of a 12-man firing squad when carrying out an unlawful execution order. The method of elimination can only work here if I were to set each of the squad members' shots as an alternative to all of the other 11, and each shot would be a necessary condition for explaining the result, without the 11 other ones being considered. If I were to, instead of thinking away the shot in question, think away only one, or three, or nine of the other shots, then the shot in question is still regarded as being superfluous for the explanation of the victim's death. I have to replace the conditions in question with another component that is necessary for the explanation of the result, without the former condition. However, the danger of an opposite mistake occurs here. I could think away more than the act in question would be able to substitute. Besides the other 11 squad members from our example, I can eliminate the man who loaded the guns. Now the shot from the 12th member appears unfit to replace this component in the causal explanation. I must first know the number and also the quality of the multiple causes before I can apply this method of tentatively eliminating components with any degree of certainty. Only the causal laws tell me which facts I can replace with others in an already constructed causal explanation.²⁰

We cannot provide a reliable way to recognize all of the causes given the possibility of multiple causation. Despite of this, we can prove the contributory causality of every fact for which we present a sufficient minimum condition of which they are a necessary component.

VII. Defining the result of a criminal offence

It is no longer necessary to include as many details as possible in the description of the result in order to exclude pre-empted causes. But the question what belongs to the concrete result of a criminal act becomes that much more **879** important. The law only describes a type of result, the so-called "abstract result." We can understand every law, the same as every

¹⁹ This modification of the formula for causality goes back to *Traeger* (15th footnote), page 46.

²⁰ *Tarnowski* (15th footnote), page 47 is very instructive in this point.

general term, as an incomplete sentence; a so-called “Grammatical function.”²¹ So then instead of writing “blue,” we write the incomplete sentence, “...is blue,” because by inserting some sort of object we can complete the fragment and make it a full sentence that is also true, provided that the object is, in fact, blue. The understanding of comparative terms as uncompleted terms is more familiar to us than qualitative terms. Like when we hear the term “bigger,” we intuitively think that it is incomplete and are ready to write, “...bigger than...,” or “...is bigger than...” Even nouns can be written in this way. Instead of “a person,” we could write “...is a person.” We can also deal the same way with the legal elements of an offence. We first obtain a complete sentence that is true if the affected individuals possess the characteristics and are linked to one another by the relations that the laws describe. By doing this we achieve the individual case of the concrete fulfilment of all of the components of an offence,²² e.g. a case of manslaughter, or property damage, ... “Concrete” is understood here as individual.²³ Next, we continue with the following preliminary explication of the concrete result: A concrete instantiation of all components of an offence is the fact at which we arrive when we fill in the variables that occur in the abstract description of the result using terms for individuals.

880 If we now try to explain why such a sentence is true, e.g. the sentence ‘X has died’, we will come to the conclusion that the mother of X and the doctor who has once saved his life, are causal for this fact as no one can die unless he has been alive before. In order to avoid such absurd results we don’t need to refer to the judgement that neither the mother nor the doctor did wrong. We just have to acknowledge that the result of the crime we have to explain is not the mere fact that a person has died or a damage has occurred, but only the disadvantageous change of state of a person or thing, e.g. from alive to dead, from healthy to injured, or from functioning to damaged. Therefore, we no longer need to explain why the person was living or healthy or why the thing was functioning, we just can take this situation as given. If the law prerequisites a certain situation or a certain quality of an involved person before the beginning of a criminal act, we can take this as given as well. That’s where special qualities of the victim belong, as well as qualities of the culprit. We don’t need to explain who has sold the item to the victim from whom it was stolen later on. If a civil official committed malpractice, we don’t need to include the superior who had appointed him to the office into the explanation of the crime, but rather just take for granted that the culprit was an official. We can even presume the existence of the culprit as given avoiding the absurd question whether his grandmother is causal for his crimes. So we have to distinct between the initial situation which is assumed by the law **881** and the disadvantageous change the culprit has caused to a given object which is protected by the law.

Let us test the method of causal explanation of the criminally relevant result described above in some problematic cases. *Engisch* constructs the following case²⁴): A beats up B, who fiercely defends himself. He calls to C and D to hand him the cane that is standing over in the corner. C and D run over to the corner, but C is able to grab the cane right before D or had knocked him out of the way while running to it and brings A the cane. B was abused by a

²¹ This term function, which originates from calculus, was first applied to general terms by Gottlob *Frege*, *Funktion und Begriff*, in: *Funktion, Begriff, Bedeutung*, 5 *Logische Studien*, published by Günther *Patzig*, in 1962.

²² One could demonstrate the filling in of the vacant spots of a syntactic “set type” with individual constants using the subsuming function by testing the facts of a case under specific elements, instead of using the usual syllogistic schema *cf.* *Rödig*, *Die Theorie des gerichtlichen Erkenntnisverfahrens, Die Grundlinien des zivil-, straf- und verwaltungsgerichtlichen Prozesses*, 1973, page 168; *Puppe*, *Idealkonkurrenz und Einzelverbrechen*, *Logische Studien zum Verhältnis von Tatbestand und Handlung*, 1979, pages 62 et seq.

²³ For more to this term, *Engisch*, *Die Idee der Konkretisierung in Recht und Rechtswissenschaft unserer Zeit*, 1953, pages 10 et seq.

²⁴ *Engisch* (10th footnote), page 15.

dangerous instrument, namely the cane, which fulfils the concrete result of battery²⁵. A did not initially have the cane; therefore we must explain how it came to be in his possession. A person can obtain a cane when someone gives him one. This is our causal law. Now we have to search for the facts of the case that are actually provided to us, which would have fulfilled this law. We would find that C brought the cane to A. Thereby C's causality for the result is confirmed. The statement that if C did not hand the cane to A, D would have done it, is completely irrelevant. The executioner case is able to be solved just in the same manner.

In the case about the vase, the activities of the painter do not appear in the causal explanation of the result. The result is that an object, in this case the vase, is destroyed. The fact that it was painted does not belong to the description of its destruction, which is the change in its condition. Though the painting of the vase may have significantly increased its value, which might play a role in the assessment of the penalty; however it does not belong to a change requiring a causal explanation, but rather just to the conditions that are presupposed when entering the initial situation. The painter did not jointly cause the concrete property damage, even though he set a condition that is relevant for the assessment of penalty when judging the situation.

We also do not need the acts of the switchman, namely his altering of the railway switch, in order to causally explain the deaths or bodily injuries of the passengers when both tracks were equally blocked by the landslide, because the location of the deadly- or bodily injuries does not belong to the concrete elements necessary to fulfil the crimes of homicide or bodily injury. No one would hold the doctor **882** responsible for the death of the incurable cancer sufferer, because he referred him to a sanatorium in the black forest to enable him to have a few nice remaining days, even though the fact that the patient died while in the black forest is not causally explainable without including the actions of the doctor.

But we still haven't tested if our method of identifying a legally determined result actually fulfills all of its necessary requirements. Does our way of identification always suffice to differentiate between the various legally determined results? The variables of larceny for example, are a thing and a perpetrator. The perpetrator isn't part of the description of the result, he rather just becomes part of the actualization of the legally determined result through the identifying the causation of the result. Is it even possible to steal one and the same thing several times; how can there be multiple legally determined results then? Or how can there be several legally determined results, when different persons damage a thing or hurt another person independently from each other? If the legally determined result of § 223 StGB (bodily injury) only consists of the fact that a certain person is injured, there will only be one result. This result could then be explained by looking at the action of one of the perpetrators without even considering the other one, which leads us to the issue of overdetermined causes. Intuitively we recognize that there are two results, caused by two different perpetrators. The solution of this problem is the fact that the legally determined result of § 223 StGB includes another variable. It is hidden behind the verbs 'to maltreat' and 'to damage one's health'. We describe the result of § 223 StGB as a case of bodily injury, that of § 303 as a case of property damage, or that of § 242 as a case of loss of custody of a thing, that of § 263 as a case of damage of one's finances, etc.

In general it is simple to evaluate whether there is one or many cases of loss of custody, property damage or bodily injury. These variables of the results should be distinguished from the variables of an action also included in the verbs, such as taking away, damaging of a thing, injuring someone's body. The identification of those variables of an action, like a wound, a bruise, a loss of a thing, that has to precede the determination of causation, **883** must therefore be distinguished from the configuration of the concrete crime which can be a

²⁵ § 224 StGB: Gefährliche Körperverletzung

combination of several of those variables of an action, for example the many bruises of the victim, originating from one beating.

883VIII. *Quantitative Definitions of the Result*

In order to correctly describe a damage as a result for an injury, we also need quantitative determinants. There are cases in which the fact that a damage occurred at all can be explained without the act of the culprit but where the act of the culprit was causal for increasing the extent of the damage. For example, someone posing as an investment consultant convinces another person to purchase securities which are in fact worthless under the deception that their value will soon increase. Subsequently, another culprit who overheard all of this going on persuades the person to buy more of these securities from him in order to also get rid of his own worthless papers. The customer only submits one order to his bank for both deals, so that only one damage occurs. If we were to omit the amount of the financial loss, we would still be able to explain the result without including the deception of the second “consultant.” Though, we could not explain it without him or her if the amount were to be included. Since the amount of the injuries is relevant in order to determine the gravity of the deceit, it must therefore be included.

Following this line of reasoning, the person who caused a reduction of the amount of securities the victim bought would also be held causal for the result. If, for example, a friend of the investment consultant who doesn’t wish to expose his friend influences the customer’s purchase amount by explaining to him that there are not many securities of this sort left on the market and thereby motivating him to buy fewer of them, one cannot explain the exact gravity of the deceit without including the friend’s intervention. If one were to arrive at the conclusion that he is causal for the injuries, a ground for justification hardly comes into consideration. Vindicatory justification would require that he had had no chance to completely avoid the damage at all.²⁶ The question of how **884** this person’s conduct, that clearly helped the legally protected interest, could be justified is too absurd to obtain a meaningful answer. Justification grounds would clearly only be used here in order to correct for mistakes already made.

One would also not need to apply a special principle of intensification in order to refute the objective culpability in a later stage of investigation that goes beyond the determining of the causality.²⁷ An appropriate determination of the result itself would suffice in this situation. One does not even need to explain that the damage occurred exactly in this extent, but rather that it occurred at least in this extent. We then leave the upper bounds of the amount of the damage open. For the explanation of causality for the result that was determined in this way, we no longer need the actions that led to a reduction of the damage, because it is not incorrectly explained why the damage occurred at least in the given amount.

There are no fictive elements in this at least description of the result and its causation, especially not the one that would have occurred had it not been for the intervention of the person who mitigated the damage. We just give a description of the result which is less exact than possible, but nevertheless is true as well and which contains every information which is relevant for explaining the negative aspects of the result we have to impute to a person’s act. These cases of reduction of a forthcoming damage are to be distinguished from constellations of pre-empted causes, where the culprit causes a minor damage, simultaneously preventing a greater one. He who beats down another person and thereby prevents that person from continuing his journey into the next town where his enemy was waiting for him with the intention of crippling him, sets a sufficient lawful condition that the actual personal injury (as

²⁶ Cf. *Samson* (10th and 11th footnotes), pages 86 et seq.

²⁷ Cf. *Samson* (10th and 11th footnotes), pages 96 et seq., especially page 99; similar is *Wolff* (9th footnote), page 22 et seq.

it occurred or worse) took place. A hypothetical test using the c.s.q.n.-Formula would lead to the result that without his actions, a more severe personal injury would have occurred. In contrast to a hypothetical test, the method of sufficient lawful conditions allows for non-restrictive upper-bounds for the degree of the result, from which this case **885** is to differentiate from the above situation where the blow was cast with the intention of weakening an attacker's aggression.²⁸

Since the definition of the quantitative upper-bounds limit in the description of the result is left open, the much discussed cases of mitigating damages are resolved. This solution, however, reaches its limits where the forthcoming damage was not just reduced but replaced by another one, which is less serious for the affected person, but still fulfils the required elements of the offence. For this explanation, the behaviour of the rescuer can no longer be eliminated by an appropriate description of the result. He who deflects the swinging fist intended for the victim into the window pane will be causal for a property damage. In this situation, the solution must be searched for, now as it was before, in the justification by the best interest of the victim.

This definition of the result becomes especially relevant in practice for the so-called dis-incitement of the cardinal culprit from fulfilling a more severe form of the offence. That it is inappropriate to make a person who successfully convinces a culprit not to carry through with certain parts of a crime responsible for the remaining parts that the culprit did commit is undisputed. But using the principles of the result in its concrete shape, one can hardly find satisfactory dogmatic constructions for this conclusion.²⁹

We also need another rule for determining the result for the cases in which the result is escalated. We have already seen that the causal relationship can be manipulated through the description of the result according to the doctrine of the result in its concrete form. If I were to include a detail in the description of the result that would be causally explainable through the actions of a person, I can also construct a link between this person's conduct and the entire description of the result in order to establish the imputation for the result as a whole. **886** In order to eliminate this manipulability, I suggest the following rule: A part of a divisible damage which can be explained without the actions of the culprit is to be separated from the amount of damage for which he is made responsible. For example, if the culprit pollutes a river, which is already polluted by others, he could be declared as being causal for the entire pollution in this river if that is taken as the result to be explained, but this damage is divisible into the amount of pollution that can be explained without his act and the amount that he himself contributed.

This rule does not mean reverting back to the necessary condition, because we are still not considering pre-empted causes or constructing hypothetical causal chains. We are merely making the attempt to derive a fact from other facts, according to laws of causation without including the act to be tested. If this is not successful, but possible when the act is included in the explanation, then and only then does the fact in question belong to the description of the causal process that is imputable to the culprit.

Let us first exemplify this by our investment consultant case. Our culprit gained the knowledge that a fraudulent investment consultant convinced his victim to buy his worthless securities under the charade of a certain positive increase in value. In order to also be rid of his own bundle of these securities, he deceives this victim even further saying that these stocks are so sought after on the market that he needs to decide quickly whether he would want more of them in the near future. With that, the victim provides his bank with a single

²⁸ Because this situation does not consider substitute clauses and deals with fictive causal chains, we also do not need, as *Samson* (10th and 11th Footnotes), page 125 et seq., providing an additional "carry over" principle to correct for the intensity of certain results.

²⁹ Cf. to this *Bemmann*, Die Umstimmung des Tatenschlossenen zu einer schweren oder leichteren Begehungsweise, in: Festschrift für Gallas, 1973, page 273, 275 et seq.

increased purchase order that is sufficient to purchase the bundles of both “consultants.” If one interprets the situation in the way that it suggests, that the full extent of the damages suffered by the cheated investor constitutes a case of fraud, then one also recognizes that the result cannot be explained without the actions of both investment consultants. Despite this, it would not be just to pin the entire damage fully on the second deceptive consultant, because the deception of the first consultant was already sufficient for a part of the damage. On the other hand, it would not hinder imputation of the additional damage to the second consultant if the victim would have made an even worse investment proposed by a third consultant had the second one not advised the victim.

The problem of aggravating or mitigating the result becomes especially practically relevant in the modification of the decision to commit an offence. The German Federal Court holds the one who incites another person who was already determined to commit a crime to commit a worse form of the crime responsible⁸⁸⁷ as an instigator of this entire crime.³⁰ One can arrive at this conclusion by declaring the resolution to commit the crime as a whole as the result of the incitement, which can then only be causally explained by including the incitement to commit the worse form of the crime.³¹ However, as has already been shown, when operating in this manner one can theoretically make anyone that was causal for some random result responsible for every other result by conjoining them together into one single result.

Our additional rule that no one qualifies as being the cause of a change that can be causally explained without the person’s actions provides us with the result that only the circumstances which make the crime worse can be imputed to the consultant. He can therefore only then be punished as being an instigator if this escalation element also constitutes another independent crime. Otherwise, his contribution to the result can only be considered to be an accessory³², because for this offence it suffices that he contributed to causing a part of the offence, while the Instigator must have caused the resolution to commit the whole offence³³³⁴.

888 IX. *The Removal of Pre-Empted Causes*

The acknowledgement that the *conditio-sine-qua-non*-Formula is incorrect in so far as it only accepts necessary, but not sufficient, conditions for the result as being potential causes enabled us to determine causality in cases of pre-empted causes that would have instantiated the same result in absence of the pre-empting causes. However, these pre-empted causes are also sufficient conditions for the result according to the laws of causation. If our previous

³⁰ BGHSt. 19, 339.

³¹ So is the method of *Baumann* (10th Footnote), page 586; *Stree*, as well in: *Bestimmung eines Tatenschlossenen zur Haupttat*, in: *Festschrift für Heintz*, 1972, page 277 et seq., 281 et seq.

³² Cf. *Cramer*, Commentary to a court decision JZ 1965, 32; *Bemmann* (36th Footnote), p. 278.

³³ Cf. *Cramer*, JZ 1965, 31; *Bemmann* (36th Footnote), page 275; the same *Stree* (38th Footnote), page 280 et seq.; and also *Grünwald*, *Der praktische Fall*, JuS 1965, 311, 313. The German Federal Court and its supporters could however also be interpreted to mean that they wish to abandon this principle. This can be interpreted out of formulations such as, the consultant „significantly overshoot the resolution to commit the offence,“ cf. BGH 19, 240; *Maurach/Gössel/Zipf*, *Strafrecht, Allgemeiner Teil*, 2nd Volume, 5th Edition 1978, page 247, which was explicitly rejected by *Stree* (38th Footnote). Whether or not this method is practical is a particular problem of instigation that cannot be further examined here. It has also been alluded to that the suggested rule for determining the result should solely remove the demonstrated manipulability problem and not, for example, solve the general problem of identifying the offence through a change in the culprit’s resolution to commit the offence.

³⁴ This is a characteristic of Instigation that implies a type of single-handed offender in connection to the resolution to commit the offence as a result. Much like being an accessory, it suffices for fulfilling the elements of the offence when the culprit causes a part of the result. It is within the meaning of the legal entity of accessory, to indict him for the entire result of which he was only a part, under certain preconditions.

explication of the causes were complete, there would be no difference between pre-empting causes and pre-empted causes.

In accordance with the goal of this essay, let us leave aside whether this would be a suitable and fair principle for imputation, and hold on to the idea that we are not satisfied with an explanation by a pre-empted cause, not in natural sciences, nor in law. That raises the question of how we are able to separate the pre-empting causes from the pre-empted causes. In order to explain this difference, do we not need a concept of energy or power as a cause and in order to detect its random determining elements of the result, ergo a “result in its concrete form”? It will be shown that we will need to use various other facts, but despite this won't need to include them in the description of the result, and that we will need a certain characteristic of the laws of causality that would be implied in a concept of a cause as energy, but won't need this concept of energy as a cause itself.

This characteristic of the laws of causation is that they are so-called laws of proximity, meaning that they connect temporally and locally neighbored events.³⁵ Temporally and locally distant events can thus only be causally tied to one another through intermediary steps. So we **889** are not satisfied if we can explain an event through a locally or temporally distant phenomenon as a sufficient condition of it according to a causal law. We instead further search for a chain of proximal causes and results which connect the locally or temporally distant causes with the result. Thus we obtain causal processes and a so-called genetic causal explanation.³⁶

For this reason, we do not automatically accept a causal connection as being correct when antecedents and consequences are true and we have a rule that the antecedents are sufficient conditions for the consequence. When dealing with events separated timely and locally, we instead also require that the intermediary steps that connect these two remote events are instantiated. If we find that only a part of these intermediary steps did not occur, we will dismiss the causal explanation as being wrong and begin again to find other events in combination with other natural laws to which we can trace the result back to. This is why we made the appeal on page 869 that one can exclude pre-empted causes by strictly clinging to the real facts³⁷ and posed the rule that pre-empted causes can be recognized by being not completely true.

That is what is actually meant by *Hartmann*³⁸ and others when they want to consider the route or manner in which the result occurred when constructing the causal description.

Let us assume that we have to test whether a bomb planter is causal for the destruction of a house. Next, we find that the bomb was large enough to blow up the house and it was furnished with a functional detonator. Despite this, we will not declare the bomb planter's actions to be causal for the destruction of the house when we determine that there was no explosion shortly before the house collapsed, even though **890** he fulfilled a sufficient condition according to natural laws to cause the destruction of the house. The planting of the bomb two hours before can't be directly linked through a proximity causal law to the destruction of the house, but rather only through a series of changes that followed one another and would lead to the result; such as the ignition of the fuse, chemical reactions of the explosive materials, a shockwave, etc. We would then search for other conditions that could have caused the house to collapse and would discover that due to mining, the ground

³⁵ This proximity requirement is insinuated in the acceptance that all processes have a finite speed. The physical constants such as the speed of light as the highest possible speed would be obsolete if we were to accept long-distance effects as a possibility; cf. *Stegmüller* (5nd Footnote), page 459.

³⁶ For a very instructive description to the causal chains and their possible connections, see *Walder* (30th Footnote), page 127 et seq.; and for genetic causal explanations, see *Stegmüller* (5nd Footnote), page 117 et seq.

³⁷ Cf. to this theory, Arthur *Kaufmann*, Die Bedeutung hypothetischer Erfolgsursachen im Strafrecht, in: Festschrift für Eb. Schmidt, 1961, page 200 et seq., 207 et seq.

³⁸ See Footnote 19 above.

underneath the house had been hollowed out, causing the house to slowly slant and sink, forming cracks in the walls until they finally gave way and collapsed.

The objection could be made that we would not have done anything further than transfer those facts of the case that the majority opinion uses to form the result “in its concrete form” in order to exclude pre-empted causes into a causal process in its concrete form. We would then be subject to the very same reproaches that we accuse the majority opinion of making, circular reasoning vulnerable to manipulation. We can only counter this objection by supplying the rule according to which it is determined what does and does not belong in the description of the causal chain of events.

Our starting position is that we have several different sufficient conditions for the result according to natural laws and therefore the question is which of them is a cause and which is a pre-empted cause, whereby the possibility of double or multiple causality has not been excluded. If we now analyze the genetic explanations of causality in order to test whether or not the necessary intermediary steps were instantiated that implicitly connect the causes in question, then it is also valid here that only necessary components of sufficient conditions belong to the following intermediary stage, etc. until arriving at the result, whose description has been standardized in the law. Thereby, every one of these facts is also a necessary component of the sufficient condition for the result. The genetic explanation operates backwards, starting at the result and working its way chronologically back to the cause in question – namely the act of the culprit.

The necessity of a fact can also be checked here by removing **891** it from the genetic explanation of the next step and then testing whether this explanation is still conclusive. In this way, I cannot genetically explain the collapsing of the house using the planting of the bomb according to natural laws, without claiming that there had been an explosion right before the collapse. Had I included the fact that the temperature inside the house at the time of the explosion was above 0° C within my original description of the causal chain, the expert would probably explain to me that the detonator that was used is not temperature sensitive and that I should eliminate this fact from my description of the causal chain. If I discovered that a certain fact in this sense, which is necessary for the genetic explanation of the result though a human act, is not instantiated, the act is shown to be a mere pre-empted cause, even if it creates a sufficient condition according to natural law.

Let us summarize: The difference between the *conditio-sine-qua-non*-formula and the procedure to determine the cause, which has been developed here, is first of all that when using the formula, the act must be necessary in order to explain the result at all, so in other words: It must be necessary if we include all the other facts given in the single case, but as the cases of multiple causality show, it is sufficient when the act is necessary within a sub-class of all of these facts. **892** Several such classes exist in cases of multiple causality. A pre-empted cause is a necessary component of a genetic causal explanation through a class of sentences, which are partially not true.

It is often not the antecedents which are still unknown, but certain circumstances under which the result occurred that offer signs that a sufficient condition for the result was a pre-empted cause. The accompanying conditions, especially the time when the result occurred, allow us to make a conclusion to the antecedents of the particular genetic explanation of the cause. Any accompanying conditions of the result can serve as signs to indicate whether an act was a cause or substitute cause of the result. Therefore, it is neither necessary nor even useful to include these accompanying events in the description of the result, as the ‘result in its concrete form’ doctrine believes it must be done in order to exclude substitute causes.

The appeal to the causing of the result “in its concrete form” and in particular to the relevance of the exact point in time in which the result occurred, especially when dealing with homicide, has led to the confusion of two different constellations: The cases, in which the culprit only had an influence on the exact time, in which the result took place and the cases in

which the culprit caused the result, but also prevented a possible cause that would have led to the same result to a greater or lesser difference in time.³⁹ Someone who believes it to be necessary to substantiate the causality of the person that poisoned a terminal patient by referring to the idea that even a person with such a short remaining life-span still deserves the full protection of the law⁴⁰ or that every damage is to be understood as a shortening of the lifespan of a legally protected entity,⁴¹ **893** must accept the consequence that the one who gives the culprit the right of way while on his way to commit the crime is causal for the result of the crime.

However, the question whether or not the description of the result that is given in the law can or should be understood as a shortening of existence of the legally protected entity and, if that should count the same for all kinds of damage, is to separate from the problem of excluding pre-empted causes. This problem does not deliver arguments to support this idea because the correct solution is not dependent upon whether or not the time of the occurrence of the damage is to be included into its description.

As stated, only those facts belong in the genetic causal explanation of a result which are necessary to connect the intermediary steps within the causal process. This is especially important to adhere to when quantitative details occur in those facts. A natural scientist would try to describe any quantity as exactly as possible. Though, if we were to follow his example, we would arrive at the conclusion that every act which influences this quantity is a part of the causal explanation, even if the occurrence of the result is in no way dependent upon these changes. We are not allowed to make the quantitative details any more precise than is necessary to explain the result.

The exact position of the bomb in the house must not be provided, so that the action of the person who moves it from one room to another after it had already been planted, without having any effect whatsoever on its ability to detonate play no role in the explanation of the collapse of the house.

Even the degree of an influence must only be mentioned insofar as it is necessary for the causal explanation of the result. A person who escalates this minimum effect can be excluded from the causal explanation right from the start. According to this rule, the following case presented by *A. E. Wolff* can be solved:⁴²

A worker severed one of his fingers while using a punch press for which the settings had been adjusted earlier in order to work with more robust pieces of metal by the foreman. **894** One arrives to the acts of the foreman as being causal if one includes the exact force under which the machine was operating in units of kilopond. But whether the machine was operating on this setting or a lower one plays, as supposed, no role as to whether the worker's finger could be severed or not, because even the weakest setting of x kp would have been sufficient to accomplish this. We no longer need to include the foreman's actions in the causal explanation when we use a minimum setting necessary for the accident to take place instead of the exact setting that it was operating on, by writing: The machine pressed on a finger with a force of at least x kp. In order to explain this intermediary step, we only need to know that the machine did not operate on a setting below x kp. Therefore, the change in the settings by the foreman does not appear in the explanation of the accident.

³⁹ Cf. for example *Schönke/Schröder/Lenckner* (10th Footnote), vor § 13 margin nr. 81; *Rudolphi*, SK (10th Footnote), vor § 1, margin nr. 46; *Heimann-Trosien* (10th Footnote), Introduction, margin nr. 101; *Blei* (10th Footnote), page 78; *Maurach/Zipf* (10th Footnote), page 269; *Wessels*, Commentary to a court judgement, JZ 1967, 449; *Walder* (30th Footnote), page 133.

⁴⁰ As does *Schmidhäuser*, Strafrecht, Allgemeiner Teil, 1st Edition 8/75; though differs in the 2nd Edition.

⁴¹ Recently, *Samson* (10th and 11th Footnotes), page 97 et seq. advocated such a description for the result, however, not for determining the result, but rather for his- the liability for the determining the causality restrictively- Principle of Escalation.

⁴² Cf. to this case *Wolff* (9th Footnote), page 23.

By abstaining from optimal preciseness when accounting for the data relevant to the case, we are accepting special difficulties that may come up in certain cases. It can become problematic if the culprit initiated another causal chain at the point in which a causal chain that was already in motion reached him or simply altered circumstances which play no role for the causal explanation.

Let us demonstrate the problem once more by using two versions of our example of the two soccer players. In the first version, the goalie was not able to fully deflect the ball. The ball just grazed his head, through which its course was altered ever so slightly that it bounced off of the wall and hit the window. Even without this interference the ball would still have bounced off of the wall and then hit the window. If we were to describe the preliminary steps of this process as exactly as possible, we would of course have to recount the exact positions of the ball in every moment. The ball's contact with the goalie's head would then be necessary to causally explain the breaking of the window. Instead of retracing the exact course of the ball, we could specify a collection of tracks which the ball could have taken in order to hit the window. These paths would be determined by the position of the defensive midfielder, the wall, the window, the angle of the kick and the size of the wall and the window pane. In this description of the chain **895** of events, the contact the ball had with the goalie's head does not occur. Correctly noted, we are not imagining a hypothetical path of the ball that it may have gone had it not been deflected by the goalie's head. We are simply not making the details concerning the position of the ball more exact than is necessary in order to explain the shattering of the window. This result is plausible, but now to our second version: if the goalie succeeded in defending the shot, heading the ball directly into the window pane without it having touched the wall. We now could make our description of the path of the ball so unexact that it includes that both paths, the one that includes the ball hitting the wall, as well as the one that does not include it hitting the wall. This would however cross the line between just an unexact determination of the intermediary steps, opposed to a combination under generic terms of intermediary steps that were really given and those that were not. Of course, this is not a sharp and certainly not a logically exact method of differentiation. Every undetermined account is a type of general term under which the more exact accounts would fall. This is not a general theoretical problem of the causal explanation, but rather a specific legal problem, because the question of whether or not a certain fact that is instantiated should be included in the causal explanation is only decisive for a jurist. The natural scientist would certainly always include all possible quantitative descriptions in his description of causal chains, regardless if the class of included facts is enlarged tremendously by doing so.

X. "Negative Conditions" as Causes

The general validity of the relationship between causes and results as a fundamental prerequisite for imputation depends on the condition that negations are accepted as descriptions of a cause. In cases of prevention of a rescuing process and in cases of omission, the connection between the result and the behaviour of the culprit is only possible through negations. *Engisch* did not bear any objections against that⁴³, but other jurists have refused to accept so called negative facts as real⁴⁴ **896** and therefore believe it to be necessary to develop a new model, the so called quasi causality for these cases⁴⁵ or to go back to hypothetical

⁴³ Cf. *Engisch* (10th Footnote), page 28; of the same opinion is *Rudolphi*, SK (10th Footnote), vor § 1, margin nr. 43; and *Samson*, as well (10th and 11th Footnotes), page 32; and *Armin Kaufmann* in principle, too, in: *Zur Dogmatik der Unterlassungsdelikte*, 1959, page 60.

⁴⁴ Cf. *Arthur Kaufmann* (44th Footnote), page 214; *Wolff* (9th Footnote), page 12, 4th Footnote, page 18, 24th Footnote; *Philipps* (23rd Footnote), page 101, 128th Footnote; *Walder* (30th Footnote), page 123, 152 et seq.

⁴⁵ Cf. *Philipps* (23rd Footnote), page 103 et seq., through application of functional explanations. See also *Walder* (30th Footnote), page 121 et seq., 152 et seq., for the offences committed by a failure to act by setting the guarantor relationship in place of the causal relationship as the first precondition for imputation. *Armin*

reasoning about what would have happened if the omitted act would have been performed according to the classical condition-sine-qua-non-Formula.⁴⁶ But now it is not enough to eliminate the so called negative fact, namely the omission, the omitted act is to be added in order to find out that the result would cease. As the hypothetical cause of the prevention of the result now is a positive fact, there seems to be no problem to include it into a hypothetical causal explanation, even though the explanandum is a negative fact.

It seems that this reluctance of the jurists to accept negations in the causal explanation can be traced back to the intuitive bond of the metaphysical idea that causes are forces or mediums, according to the proverb, “From nothing comes nothing.” It seems that we do not need the negation in order to explain the causality of an event, e.g. one does not need the fact that the board that was being reached out to the drowning person did not reach him in time, because it was pulled away by the culprit. When explaining the cause of his death, it is sufficient to say that the victim fell in the river, was swept away by the current, inhaled water, etc. The board never came into the picture **897**, because the culprit had prevented it⁴⁷. The impression comes into being only because one only accepts positive events or “dynamic” events, even when explaining the causality⁴⁸, meaning those events that one can imagine as a force being carried over onto an object.

A further mistake occurs in the argumentation against negations as causes, namely the confusion between the negation and the negat, if it is asked how something that does not exist should take part in the structures of something that does exist?⁴⁹ That what does not exist is the negat, not the negation. The negation is “something real,” insofar as the sentence in which it is formulated is true. The sense in which the meaning of true negation sentences are supposed to be less “real” than the meaning of positive sentences is not clear. **898** For special legal purposes of imputation, we have determined causes to be elements of a minimal condition of the result according to laws of causality. “Negative” elements also fall under this definition. We can recognize them as being causes as long as this definition is not refuted as

Kauffmann (50th Footnote), page 61, believes a different method for establishing imputation to be more appropriate when dealing with offences committed by a failure to act, because the cause for a failure to act is insufficient. “The question of causality, that alone interests us regarding the *behavioural* theory is the one that ties in with the *causality of a person*” (translated from original; emphasis is original). However, this question is incorrectly formulated, at the least. A person cannot be the cause of an element (result, change), because elements are only able to be derived from other elements, not from individuals, *cf. Carnap* (23th Footnote), page 190. Nothing other than the causality of a person’s behaviour or even the negation of a person’s behaviour can be understood when interpreting the term, “causality of a person.” Another question is the one that seeks to find the connection between a failure to act and the one who fails to act upon which a judgement of tort liability or criminal conviction could depend.

⁴⁶ According to *Wolff* (9th Footnote), page 30 et seq., 55; *Walder* (30th Footnote), page 140, for the abortion of the rescue, at least.

⁴⁷ As seen by *Wolff* (9th Footnote), page 18.

⁴⁸ *Walder* (30th Footnote), page 123, proceeds correctly provided that he expressly stipulates that he only accepts changes, not conditions, when determining causes or results, whereby negations are barred. Though, not because they are “nothing,” but because they are not changes. But, he also admits that this is his determination by definition. Determinations are only subject to their usefulness, which is inappropriate for causality, especially as a basic foundation for the connection between the result and the imputation. However, not even the academic theories restrict their definitions of causes to only be made up of changes, *cf. Stegmüller* (5nd Footnote), page 433; *Carnap* (23rd Footnote), page 190.

Even though he expressly states that it is logically without fault to include negations, *Maiwald* refuses the use of them when explaining causality in criminal law in his latest work, “Kausalität und Strafrecht.” He believes them to be inappropriate, because they blur the division between an active contribution and an offence caused through a failure to act. However, the relevant difference in criminal law and its standard of conduct between an active contribution and a failure to act by the person remains undiminished, even if one includes both in the causal explanation. On the other hand, causality could then remain the common element of imputation for both an active contribution and failure to act. Besides this, we also see that by excluding negations from casual explanations, that the prevention of rescue also affects cases where a contributory act is present.

⁴⁹ As seen by *Wolff* (9th Footnote), page 12, Footnote 4, with reference to Nicolai *Hartmann*.

being contradictory, inappropriate, or inadequate. It does, however, seem more appropriate for the legal imputation and also more adequate to meet our beliefs of the fundamental relationship between human behaviour and a certain result than ideas like forces or mediums as causes. Even those who oppose including a negation in the causal explanation concede this point in the end because they ground the imputation in cases of omission and in cases of interrupting a rescuing process at last on “negative facts”.

Another intuitive objection against the inclusion of negations in causal explanations is that one is able to think up as many possible and impossible elements that would have prevented a damage according to the laws of nature, which would require the negation to all of these elements to be included in the causal explanation.

There are always more true negations in the world than there are positions, because every position excludes a myriad of other positions, thereby making their negation true. It is for this reason that the number of propositions that belong to a complete sufficient description of the result are multiplied exponentially when the inclusion of negation is allowed.

We cannot remedy this problem by completely leaving out the negations. Otherwise, our explanations would be incorrect in all of the cases in which the so-called interfering conditions are instantiated as their negation is not a prerequisite for our explanation⁵⁰. Let us take another variation of the soccer ball example. The ball, which had been kicked by the striker, approaches the glass of the display window. Our laws of nature stipulate: When a ball is kicked from position P_1 with a force of F_1 at an angle of X° and there is a glass pane at position P_2 , then the ball will smash the window. From this law and the fact that the ball is kicked in the aforementioned manner, the destruction of the window is the logical result. This explanation is only true under the presumption **899** that there is no obstacle somewhere along the flight path of the ball. If we leave this negation out of our causal explanation, it would be wrong, if there was an obstacle, for example a street sign in the flight path and the display window was shattered by a drunk with an umbrella. Then the possibility still exists to explain the property damage as being a result of the kicking of the soccer ball if one were not to include the negative condition that there was no obstacle in the antecedents.

It is then not only acceptable to include negations in complete causal explanations, but also indispensable. The problem that complete causal explanations are practically impossible is not alone due to the negations that come up in them. Even if we only include the positive facts, providing an exhaustive enumeration of all conditions that are necessary to compose a causal explanation would also be impossible because the number is infinite. The causal explanations that are given in practice are rudimentary and follow entirely the current interests and attention of the one explaining when choosing which conditions will be mentioned.⁵¹

When it comes to causal explanations that serve legal goals, this interest is directed towards the actions of a person right from the start and usually those actions that usually occurred in a short time before the result and that were at least socially inadequate. The causality of the mother of a murderer is just as irrelevant as the producer of his murder weapon when explaining the murder. Therefore, it is not only characteristic for the negations in the causal explanations that a pre-selection of elements that could be potential causes takes place.

The negations that have been included in the causal explanation can be the negation of a person's actions with which the imputation is tied to as is the cases of omission or the negation of other facts which are traceable back to the actions of a person as is in cases of intervening in a rescuing process.

XI. Causality through an Omission

⁵⁰ For more on this, see *Stegmüller* (5th Footnote), page 145 et seq.

⁵¹ Cf. *Stegmüller* (5th Footnote), page 434 et seq.; *Carnap* (23rd Footnote), page 190 et seq.

Let us now turn our attention towards offences committed through an omission. Even though the causation of the prevention of a rescue seems to be more **900** apparent than that of an offence that was realized through a failure to act, the latter is simpler to explain as the negative condition does not need to be traced back to its causes. A negation is a sufficient lawful condition of a result when the corresponding position (all other antecedents *ceteris paribus*) is a necessary condition for its absence⁵². This is an unpleasant discovery for us. If we stay with this line of argumentation, that a sufficient condition is adequate for the imputation, it no longer requires proof that the action that was omitted would have prevented the result, it would be enough that it was impossible to prevent the result without this action, so that the negation of the action was *ceteris paribus* a sufficient condition for the result. The father of the sick child who does not call the doctor creates a sufficient negative condition for the death of the child, even if it is not certain that the doctor could have saved the child.

We had already seen at the onset of the analysis that we cannot give just any random sufficient condition for being causal, but rather only a sufficient minimum condition, meaning that we are not allowed to include more elements in the explanation than necessary in order to deduce the result using laws of causation. A positively formulated sentence is that much stronger logically, the more determinates it contains, because it then says more about the reality of the matter. The sentence “Yesterday a criminal law professor jaywalked on the corner of Adenauerallee and Weber Street at 3 p.m.” says more about the reality than the sentence “Somewhere someone jaywalked sometime.” With a negative sentence it is just the opposite. **901** So, in order to provide a negative minimum condition, we must arm the negat with as many determinates as possible without it ceasing to be a sufficient condition for the result to have occurred. In our example, the sufficient minimum condition for the death of the sick child was that the father did not call a qualified and cooperative doctor who would have been able to save the child. If there were no such doctor, this act would not have been possible for the father so he would not be responsible for the result.

However, one could object by saying that since it cannot be known for sure whether or not medical attempts could have saved the child, this determination cannot be introduced. If this is the case, we do not have any laws of causation to account for the negation that has been so formulated to be a sufficient minimal condition, but rather only derive that the not calling of the doctor at last was a sufficient condition for the child’s death using causal laws, but probably not a minimal condition. But doubts in the area of causation laws must not be applied in a disadvantageous manner to the defendant⁵³. This means that we are not allowed to take refuge to an only sufficient condition of which we are not sure that it is a minimal condition, so that the omission of the culprit is necessary to make it sufficient.

This problem is, however, not exclusive to negative conditions. It can also come up when testing causality using positive actions. When, for example, it cannot be determined whether the original of setting was sufficient to clamp off the finger of the careless worker in our punch press example, one cannot include the change in the settings undertaken by the foreman in the explanation by using the fact that the power now was at least sufficient to squeeze the finger of the workman.

⁵² Here is the proof shown through a trueness matrix

p	q	¬p	¬q	¬p → q	p ← ¬q
T	T	F	F	T	T
T	F	F	T	T	T
F	T	T	F	T	T
F	F	T	T	F	F

Two postulates are equivalent when they are true or false under the same prerequisites.

⁵³ For more to the problems related to laws of causation as evidence in criminal proceedings and the associated requirements cf. Armin Kaufmann, JZ 71, page 572 et seq.; *Maiwald* (55th Footnote), page 91 et seq.

This sets the precondition that the question whether the condition that does not include the act of a culprit is sufficient to explain the result or not is principally able to be decided according to natural laws, **902** and that only the necessary knowledge of the single case is missing (how did the worker reach into the machine?), or the knowledge of the causal laws (does the infliction that the child contracted still lead to his death, even if the remedies that the doctor was capable of administering were performed?). These gaps in our knowledge are those which burden the defendant when the condition is adapted to our knowledge through the inclusion of the culprit's behaviour into an at least-description of the causal explanation. A totally different question is whether we should always require causality in the sense of a causal explanation using strict laws in order to establish imputation under the aspect that perhaps not all processes are governed by strictly determined causal laws. That applies for human decisions and acts.⁵⁴ So for certain areas, especially human behaviour, but for some biological processes, too, e.g. the development of cancer, we must be satisfied with an explanation of the result by statistical laws.⁵⁵ This boils down to the "Risk Escalation Theory."⁵⁶ **903**

XII. The Interruption of a Rescuing Process

When faced with an intervening action that obstructs a rescue, we do not only have the task to explain a fact, namely the result, by a negative one, namely the omission, but we have to explain a negative effect, the lack of the rescuing even, by a positive fact, the hindrance of this event by the culprit's act. The first step is to determine the negated rescuing event. The

⁵⁴ The natural scientist would probably think of divulging the determinism in the physics of elementary particles that are attributed to probability laws. The jurist would be interested in that the psychologist cannot postulate any strict laws for a person's behaviour and that he or she (the jurist) cannot accept such laws, as long as he believes in the free will postulate. He can, however, still recognize static laws for a person's behaviour and they hold both psychology and sociology to available to him.

⁵⁵ In our model used to explain the concept, the static laws can be used in the same positions as the causal laws, which also occurs in such situations as when the course of a disease or successful medical operations are explained, cf. *Carnap* (23rd Footnote), page 16, *Stegmüller* (5th Footnote), page 83. Though this is no longer called a causal explanation anymore, cf. *Stegmüller*, page 453. The main difference to causal explanations is that the result can be logically derived from a strict law together with the assumption (sufficient condition) from which the result can logically be strictly derived from, but not from a law of probability. Cf. *Stegmüller*, page 83, pages 624 et seq.

⁵⁶ Whether or not the problem of the relationship between the result and negligence, for which *Roxin* developed the required escalated risk thesis in *ZStW* 74 (1962), page 411 et seq., is indeed a problem of causality remains to this day in dispute. However, the escalation of the risk thesis has since been used in the place of causality by *Stratenwerth*, AT, marginal nr. 209 et seq., *idem*, Festschrift für Gallas, page 227 et seq. and also from *Roxin* himself, in the Festschrift für Honig, page 133 et seq. Here, it deals with the areas for which we do not have any strict laws and not to exclude all types of culpability that would come into question. The particular problems that relate to the explanation of the result through laws of probability can only partially be addressed here. It is especially not possible to determine minimum conditions for laws of probability, even when the level of probability is set even lower. When dealing with this type of difference in risk, then its details will be included in the explanation, causing the liability of the causer to be dependent upon it. However, whether such a difference in risk through abatement of the positive action is dependent (under certain conditions) upon the missing information that would preclude the result or to make it 100% certain, because the probability cannot be increased in either one of these cases. How can one be sure that the laws of probability can be complete and that those conditions that are 100% certain are not left out of consideration? When is it admissible to assume that no such conditions exist? This would of course imply that it would be to the burden of the accused. Due to the free will of an individual postulate, it can be assumed that no 100% probability conditions for a person's decisions exist, but does that also valid for "instinctive" reactions, say those present in traffic situations? Can the assumption of 100% certain conditions for areas also be forgone for which we may still consider as being causally relevant, but that are so complicated that we usually cannot make a 100% prognosis about, medical issues for example? What does the requirement mean that the danger that was also created by the culprit must have also been "realized in the result?" Does a counterpart to the substitute causes also exist in the areas considering probability?

negation of this event in connection with other facts is a minimal sufficient condition for the result. As with a failure to act, the negat is to be armed with as many determinates as possible, because it is not allowed to be logical stronger than is necessary for the explanation of the result. *Samson* gives the following example⁵⁷: A sick person in the jungle can only be saved if he/she receives serum within a few hours. Only a single dosage of the necessary serum and the airplane necessary to transport it are available. **904** The airplane however does not have the necessary refrigeration that is needed to sustain the integrity of the serum, therefore the serum would degrade during the flight. In spite of this, this attempt is made, but one of the loading personnel accidentally spills the serum. *Samson* is of the opinion that the loader set a cause for the death of the patient, while the fact that the serum would have degraded during the flight is only a pre-empted cause that did not actually occur⁵⁸. That would be correct if the goal was to explain the loss of the serum. As *Samson* himself recognizes though, the death of the inflicted patient is not caused by the fact that he did not receive the serum, but by the fact that he did not receive the unspoiled serum in time. This negation is able to be explained according to laws of causality without the spilling of the serum.

A sufficient condition for the fact that something does not occur is the negation of a necessary condition for its occurrence. That the serum is not spilt, is a necessary condition for the rescue of the inflicted person. However, a further necessary condition for this is the availability of a refrigeration unit. Because this is not available, the spilling is not a minimum condition (not a component of a minimum condition to be more exact) for the death of the inflicted person when considering the given preconditions.

Perhaps we may regard this as a case of overdetermined causality, because both the absence of the refrigeration as well as the loss of the serum is sufficient for the explanation that the inflicted person does not receive the serum in time. But that would also apply if one of the two sufficient conditions were just a pre-empted cause. A case of cumulative causality is only given when several classes of elements are instantiated; each of which **905** is a sufficient minimum condition for the result. In the present case, a sufficient condition cannot be constructed out of any of the given components for the missing in-tact serum in which the spilling of the transport ready serum is a necessary condition, because that would only be possible if the remaining conditions would be sufficient for a rescue. One can not assume that the fact that the airplane lacks the necessary refrigeration unit can be excluded from the causal explanation of the death of the patient, because it is no longer relevant when describing the loss of the serum. For a causal explanation of the fact that the patient did not get serum which contains the spilling of the serum as a necessary element, a feasible means to transport the substance is at least implicitly provided for. In that this prerequisite is not given, the spilling of the serum is shown to only be a pre-empted cause for the death of the inflicted person.

Therefore it is clear why the intervention of a causal chain of events is a cause for a result by interrupting a rescuing process only if that process is capable of rescuing and why an omission is only causal when the omitted action would have prevented the result. But we can also explain why an omission can only be considered as a cause if the omitted action was possible, which means that all the prerequisites for it were provided for in the single situation. It is therefore necessary to trace back the omission as being caused by facts in the psyche of the culprit and not by natural conditions that made the act impossible. These facts and circumstances could exist within a form of psychological action, suppressing the impulse to

⁵⁷ Cf. 10th and 11th Footnotes, page 94.

⁵⁸ Cf. 10th and 11th Footnotes, page 95 et. seq. *Samson* suggests that instead of requiring a sufficient conditional for the result to require a necessary one for the intervention of the rescue under assumption of a break in the system, so that every substitute cause excludes the causality, because the interrupted causal chain of events was not a "rescue." "Equally valid would be if these conditions (meaning the other sufficient conditions for the result) would have already been realized at the time of culprit's actions." But he himself no longer wishes to apply these rules when the "substitute causes" are traceable back to a person's actions, because he then wouldn't be able to attribute the result to either of the culprits, cf. page 147 et seq.

rescue someone or as a conscious decision to refrain from helping. The omission could also exist by ignoring the danger or failing to come to a decision to perform a rescue. We do not need to go deeper into the dispute between intention or quasi-intention and the requirement of an omission to act due to negligence, because whether these mental facts and circumstances should be depicted in terms of position or negation, as they are only then considered to be causal if the appropriate action was not already impossible to perform right from the start. Only then can we obtain a set of true sentences in which the omission **906** constitutes a sufficient condition in which a psychological circumstance is a necessary element. If on the other hand the rescuing act is impossible, the decision to abstain or the indecision to act can only be considered as being a pre-empted cause. Therefore, the person who made up his mind to not act while falsely believing that there was an opportunity to rescue a person for whom he was responsible can only be punished for an attempt, because he did not cause the offence in contradiction to his perception of the situation.

XIII. Omissions and Interruptions of Rescuing Processes As Overdetermined Causes

Is cumulative causality still possible under the premise that an omission of a rescue can only be interpreted as being causal when the omitted action was feasible to have been successful, or could the omitting person claim that his/her rescuing action would have been ineffective anyway due to the omission of another person, leaving no one causally responsible for the result?

The simplest case of cumulative causality through omission is that both obliged persons are capable of accomplishing the result through the same rescuing act and they both fail to act. If, for example, a child in the water is drowning and both the pool attendant and the child's mother, who happens to be a certified lifeguard, are capable of rescuing the child then they are both causal for the death of the child if they don't rescue the child.

How is the situation, if the mother, who this time is not able to swim, only has the possibility to alert the lifeguard, but doesn't, while the lifeguard, maybe because he is the estranged father of the child and is obligated to pay child support, would have let the child drown, anyway? Can the mother then claim that the only possibility available to her in the situation was to alert the lifeguard, which would not have been successful and thereby exonerating them both? The lifeguard is not responsible for his failure to rescue the child because he did not know that it was in danger. Since a person's behaviour has not been determined through laws of causality, it cannot be presumed that the lifeguard would not have saved the child, even though there is a greater or lesser probability that this would have been so. The question of whether or not the failure of the mother to alert him was indeed a necessary component for the given set of sufficient conditions for the death of the child can not be answered on the basis of causal laws. **907** Instead of using missing causal laws, one could apply laws of probability and presume the most likely behaviour of the lifeguard. Proceeding in this way would, however, be unappealing when considering human nature and would result in the situation that neither the mother nor the lifeguard is held responsible for the death of the child. Though, the mother is legally obligated to give the lifeguard the possibility of rescuing the child, independent of whether he is ready to use this opportunity or not. In order to adhere to the effectiveness of the laws, it makes sense not to presume the most likely behaviour, but rather the lawful behaviour and since a person's actions are presumed not to be predetermined anyway, presumptions of a person's decisions are necessary. Our presumption of legal behaviour of the lifeguard leads to the result that the mother's failure to alert him is a necessary component of the causal explanation for the death of the child, because according to the law the lifeguard would have been obligated to rescue the child as soon as he became aware of the danger.

The case could only be seen differently had the lifeguard already been aware of the situation through his own perception and then decided on his own not to save the child. Then the situation would be that he would be the one who is causally responsible for the death of the child and not the mother, because the mother did not have the ability to save the child. Though we have still not considered the option that she should still have tried to persuade the lifeguard or plead with him to act. Since in that it is not sure whether he would have changed his mind, we must continue to assume that he would have obeyed the law. This again leaves us with a case of double causality.

Even when analyzing an intervention to a rescuing act, the existence of multiple causality is possible. Take for example the serum case: If at the same time that the serum was spilled, the refrigeration box necessary to cool it was destroyed by another person. This is, however, only applicable when multiple existing preconditions necessary for the rescue are hindered through people's actions at the same time, because otherwise every action that happens after the first destruction of a condition of the rescue is a pre-empted cause. It then becomes possible to construct a category of truth sentences that depict a sufficient condition for the instantiation of the result in which the action that occurred earlier is a necessary component, but none of those that occurred later are necessary conditional components. If the serum is spilled, like in our example, before the refrigeration unit was destroyed, I am able and also obligated to insert the truth sentence that an airplane with the refrigeration capabilities **908** necessary to transport the serum was available when the workman spilled the serum. Thereby the spilling of the serum is shown to be necessary in order to explain that the inflicted patient would nevertheless still have died.⁵⁹ If one were however to give an explanation for the death of the inflicted person in which the destroying of the refrigeration unit were to be considered as being a necessary component, it would have to contain either explicitly or implicitly the untrue sentence that there was still enough of the serum available at the time the refrigeration unit was destroyed.

Contrary to the first impression, it is different if the refrigeration unit was destroyed by a natural event and not by the actions of a person, say an electrical short or a bolt of lightning, even if the short or lightning bolt occurred after the serum had been spilled. Because under the preconditions that natural occurrences are predetermined, their causation can be traced back *ad infinitum* and under the precondition that a person's actions are not predetermined, their causation begins with a new act and a new causal process. The preconditions providing the ability to rescue the inflicted person were already no longer instantiated, in contradiction to the first impression, when the serum was spilled because all of the preconditions for the short in the refrigeration unit or the lightning bolt hitting it were already instantiated. It only became apparent through the short circuit or lightning bolt. For this reason, a person's actions can only be considered as being pre-empted causes.

When determining that an act of intervention in an attempted rescue or an omission to perform a rescuing act is a cause for the instantiation of a result, the knowledge of all natural conditions necessary for the rescue is needed. As we have seen, even when dealing with the **909** straight forward cases to determine the causality of a positive action, the possibility that this action is only a pre-empted cause and the actual cause has been overlooked can theoretically never be excluded. This problem also becomes practically relevant in cases of omissions and interruptions of a rescuing process. When testing a case of simple causality, a

⁵⁹ *Samson* also believes this result to be correct (10th and 11th Footnote), *cf.* page 147 et seq.; Though, after proposing the basic principle that every substitute cause is to be considered after an intervention in a rescuing act had occurred, because they detract from the act's quality as being capable of rescuing, he sees himself as obligated to further expand his own definition of causality by taking direct recourse to subjective and legal considerations, *cf.* page 150 et seq.; But the relevant differences here between a person's actions as a substitute cause for the failure of the rescue and the missing natural prerequisites for it are both able to be brought into a subjectively free causality model, as demonstrated in the text.

hidden cause can be overlooked, if its effects would have brought about the same types of changes that the act that was deemed to have caused the result is able to bring about. It is here that we are able to recognize through the accompanying occurrences of the causal process whether we have found the actual or only a pre-empted cause for the result.

If an omission or an interruption of a rescuing process is only a pre-empted cause, the pre-empting cause can be of a very different type than the apparent. It can prevent the apparently rescuing causal chain at quite another point than the presumed interrupting act would. This enlarges the range of possible hidden causes that would come into consideration and prohibits us to search for these only in such a direction as the action shows us. It is in this problem and not in some extremely problematic nature of so-called “negative” causes where the special difficulties of determining the causality of an omission and of the interruption of a rescuing act lies.

XIV. Summary

Let us summarize the rules that we have recognized to be suitable to determine the result and cause in criminal law. The relation between an act and a result, is not only instantiated if an action is a necessary condition for the result; it is enough for it to be a component of a fulfilled minimal condition according to natural laws that is sufficient to bring about the result. With other words, that it belongs to the antecedents from which the instantiation of the result can be derived from, according to natural laws (causal explanation).

The concrete result, which is to be explained in this way, is not presented in a finished form. Firstly, one must pose adequate rules, in order to determine the result in a criminally relevant form. A concrete result is the disadvantageous change, of which we obtain a description when we fill the individual variables of the lawful description of a damage with individuals (constants). Since **910** only disadvantageous effects on legally protected interests are relevant for criminal law, the existence of the legally protected object, of its holder and the initial situation required by the criminal code are not needed to be explained, we just can take them as given, or in other words, it is not necessary to explain why the sentence that describes the fulfilment of the offence is true; necessary to explain is only the disadvantageous changes made to the legally protected object. Quantitative descriptions of the disadvantageous change are at least descriptions, meaning that in the interest of legal protection it is not to be explained why the damage occurred at a certain degree and not higher, but rather: Why wasn't it less or none at all. When determining a gradable damage that occurred due to an act, no part of the damage is allowed to be included in the description of the result which can otherwise be causally explained without including the act. The causal imputation would otherwise be left open to potential manipulation.

Causal laws contain minimal sufficient conditions for the results that they explain. That means that it is not allowed to include anything unnecessary for the validity of the sufficient lawful condition into the description of a causal law. The natural scientists formulate their laws so that they fulfil these requirements, but they determine the quantitative elements of the result they explain always as exactly as possible. But we have to fit the formulations provided by natural laws to our criminal law problems, especially to our consciously in-exact defined results. That means that the details in the causal laws could not be formulated more exact than necessary for the satisfactory explanation of the predefined result. This has the effect that criminally irrelevant modifications will be expelled from the explanation of the event.

Causal laws are laws of proximity. For that reason, a causal explanation is only complete when the timely and locally antecedents that exist between an act and a result and the proximate laws that connect them are properly described, the so called causal chain. We require these intermediary steps in order to exclude pre-empted causes, because they are also

lawfully sufficient conditions for the result. One distinguishes them from the real causes by detecting that some of their lawful intermediary steps are missing. In practice a causal explanation is never complete in the sense that all necessary components of the sufficient conditions are expressed. As their number is infinite most of them are implicitly assumed. **911**

A cause is every necessary component of the condition; not only forces or changes or events. There is particularly no apparent reason not to include negations into causal explanations. Therefore, offences committed through omissions and offences committed by interrupting a rescuing process are to be recognized as a cause to a result. It makes sense to only include the negations of acts which are possible at a time before the result had occurred. Otherwise, it is not necessary to explain their absence. A negation is (under the prerequisite of all the other remaining components of the causal explanation) a sufficient condition within the instantiation of the causal explanation when its contradiction is a necessary condition for its failure.