Note: The list of abbreviations is attached separately.

Summary of Judgment (Part One)

Pronounced on September 26, 2024, Shizuoka District Court, Criminal Division 1
Presiding Judge: Koushi Kunii
Judges: Shun Yatabe, Motonobu Mashiko
Case Number: Heisei 20 (TA) No. 1
Case Name: Burglary, Robbery Murder, Arson Defendant Case

Summary

The defendant is found not guilty.

Reasons

Part 1 Summary of the Public Prosecution Case

The summary of the prosecution is that at around 1:30 a.m. on June 30, 1966, the accused, with the intention of extorting money and goods, entered the residence of Fujio, the managing director of the company, located in Shimizu City, Shizuoka Prefecture (now Shimizu Ward, Shizuoka City due to a merger), and while searching for valuables, the accused was found by Fujio, and they came to a struggle near the back door of the house, whereupon the accused, wielding a kuri kogiri (blade 12 cm in length), which he had with him, stabbed Fujio (41 years old at the time) several times in the chest and other parts with an intention to kill him. He then entered the living room of the house, where he decided to kill the family members who had noticed the incident, and entered the living room of the house to kill Fujio's wife Chieko (39 years old at the time), Fujio's eldest son Masaichiro (14 years old at the time) and his second daughter Fujiko (17 years old at the time). In the same place, he stabbed Chieko, Masaichiro and Fujiko in the chest and back, etc., with the same kuri kogiri, causing the victims to suffer life-threatening injuries 瀕死の重傷, and then he seized 204,095 yen in cash, five checks (total face value 63,970 yen) and three receipts from the company in Fujio's custody, and then, in order to conceal the above crime, he poured mixed oil on them, and ignited them with a match. The above-mentioned acts of assault resulted in the deaths of Fujio due to blood loss from a stab wound to the right lung, Chieko and Masaichiro due to bleeding from stab wounds to the chest and

other parts of the body and full-body burns, and Fujiko due to blood loss from a stab wound to the heart and acute carbon monoxide poisoning. Fujiko was killed as a result of blood loss and acute carbon monoxide poisoning caused by a stab wound to the heart and lungs, respectively.

Part 2. Background Leading to the Re-trial and Overview of Proceedings

(Description omitted)

Part 3, Issues in dispute and the Outline of This Court's Judgment

1. Issues in dispute

The issue in this case is the defendant's guilt, specifically whether the defendant is the perpetrator of the crime in question.

The prosecutor argues that, assuming the defendant's confession is not used to prove guilt, it is strongly inferred that the perpetrator is a party related to the Factory and it is asserted that the defendant could have engaged in actions consistent with the perpetrator's behavior at the time of the incident (Claim ①), that the five items of clothing found in Tank No. 1 of the Factory were worn by the defendant during the crime and were hidden in the tank after the incident (Claim ②), and that there are various circumstances consistent with the defendant being the perpetrator (Claim ③).

Moreover, even considering only the facts of Claim ① and Claim ③, excluding the five items of clothing, the defendant's guilt can be reasonably inferred to a considerable degree. When taking into account the facts of Claim ② as well, the defendant's guilt is clearly established.

Furthermore, the prosecution asserts that the realistic possibility of bloodstains retaining redness on the five items of clothing that were pickled in the Tank No. 1 for over a year cannot be denied. They also argue that the DNA analysis on the five items of clothing conducted by Honda lacks credibility. Even considering the defendant's attorney's claims, there is no reasonable doubt that the defendant concealed the five items of clothing in the Tank No. 1 after the crime, and there is no basis for the assertion that the five items of clothing are fabricated.

In response, the defense attorney argues that this case involves a crime committed by multiple individuals with the intent to settle a grudge against the victims, making it clear that the defendant, who had no motive, is not the perpetrator of the crime. They further contend that if clothing stained with blood is pickled for over a year, the redness of the bloodstains will disappear. Thus, the five items of clothing were hidden in the tank No. 1 just prior to their discovery. Additionally, according to

Honda's analysis, the DNA profile of the bloodstains on the five items does not match that of the defendant. Therefore, the defense claims that the five items of clothing are neither the clothing worn during the crime nor the defendant's clothing, but rather evidence fabricated by the investigative authorities. Along with the similarly fabricated evidence of the dark blue pants made from the same fabric, these should be excluded from the evidence in this case.

Furthermore, the defense argues that the defendant's statement taken by the prosecutor in this case should be excluded from evidence as it constitutes a confession lacking voluntariness. They assert that the defendant's confession actively demonstrates the defendant's innocence.

2. Summary of the Court's Judgment

The court recognizes that there are three instances of fabrication among the evidence that would suggest the defendant is the perpetrator of the crime. Based on the factual circumstances established by other evidence, excluding these fabricated instances, the court determined that the defendant cannot be found as the perpetrator of the crime in question.

That is to say, ①the Defendant's Statement Record to the Prosecutor, in which the defendant confessed to the crime, was obtained under circumstances that substantially infringed upon the defendant's right to remain silent, with a very high risk of inducing a false confession. It was acquired through inhumane interrogation conducted by the investigative authorities in coordination with each other, causing physical and mental distress and coercing the defendant to make statements, and it includes false content regarding the clothing worn during the crime, among other things. Therefore, it is deemed to be effectively fabricated and falls under the category of a confession with "doubt about its voluntariness" as defined in Article 319, Paragraph 1 of the Code of Criminal Procedure. ② The five items of clothing, which have been regarded as the most central evidence suggesting the defendant's culpability, cannot be considered reliable evidence. It has not been proven that bloodstains would retain their reddish color after being soaked in miso for more than a year in Tank No. 1, and it is believed that these items were planted with bloodstains by the investigative authorities at a time close to their discovery, which occurred a significant period after the incident. These items were then concealed in Tank No. 1, making them irrelevant as evidence. ③The fabric piece, said to be from the same material as the dark blue trousers, which is one of the five pieces of clothing, was also fabricated by the investigative authorities and lacks relevance as

evidence. Consequently, none of these items can be admitted as evidence, and they have been excluded by the court's authority. As a result, the facts of the case that can be established by the remaining evidence do not include any facts that cannot be reasonably explained, or at the very least are extremely difficult to explain, if the defendant were not the perpetrator. Therefore, the court has determined that the defendant cannot be found to be the perpetrator of this crime.

The following sections will first examine the defense counsel’s arguments regarding the Defendant’s Statement Record to the Prosecutor. Next, we will consider the prosecution’s arguments concerning the basis for the defendant’s culpability, focusing on the most contentious issue regarding the five pieces of clothing (Claim②), specifically whether the bloodstains would retain their reddish color after being soaked in miso for more than a year in Tank No. 1, and also examining the relevance of the fabric piece, said to be from the same material as the dark blue trousers, which is one of the five pieces of clothing. Finally, we will address the prosecution’s other arguments (Claim① and Claim③) and explain the reasons for reaching the above conclusion.

Summary of Judgment (Part Two)

Part 4. Judgment of the Court

1. Consideration of the Defence's arguments concerning the Defendant's Statement Record to the Prosecutor in this case.

As described in the summary of the circumstances leading up to the retrial and the course of the trial, the Defendant's Statement Record to the Prosecutor was adopted as evidence in the Final First Instance Judgment, which was final and binding, and has been taken over as evidence in the retrial.

The defense attorney has requested that the Defendant's Statement Record to the Prosecutor be excluded as evidence on the grounds that it lacks voluntariness and has argued that the defendant’s confession and other statements positively indicate that the defendant is not guilty. The Court held that the Defendant's Statement Record to the Prosecutor in this case lacked voluntariness and could not be used as evidence, so it was excluded from the evidence at tis discretion, however, it could not be said that it positively indicated that the defendant was not guilty. The reasons for this are as follows.

(1) Summary of the Defendant's Statement Record to the Prosecutor in this case

(Omitted)

(2) Manner and course of the interrogation, etc.

(Omitted)

(3) Exclusion of the Defendant's Statement Record to the Prosecutor from evidence

A. The manner and course of the interrogation by the police officers

According to the aforementioned manner and course of the interrogation, the defendant was interrogated for a considerable period of time, averaging about 12 hours a day, until midnight or late at night, for 19 days from the day he voluntarily appeared at the Shimizu Police Station at the request of the police to the day before his confession. In addition, even as far as we have been able to ascertain from the part of tape recording of the interrogation, the police officers repeatedly demanded the defendant, who denied having committed the crime in question, to apologise to the victims and others, while showing their photographs, and informed him that he would be detained for a long period of time unless he confessed, drove him into a psychological tailspin. They also humiliated and inhumanly treated the defendant, urging him to urinate by bringing a portable urinal into the interrogation room when he felt the urge to urinate. Furthermore, despite the fact that the defendant

was arrested on the day of his voluntary appearance and detained with a ban on right of visiting and communication, he only had three visits with his defence counsel leading up to his confession, lasting approximately 40 minutes in total, and the content of these first visits were all recorded. Considering the manner and course of the interrogation, the confession given by the accused to the police officer was obtained through inhuman interrogation in which the defendant was forced to make a statement by inflicting physical and mental pain under conditions that substantially violated his right to remain silent and were highly likely to induce a false confession, and thus constitutes a ‘confession by coercion, torture or intimidation’ under Article 319(1) of the Code of Criminal Procedure, and it is clearly considered as a ‘suspected confession that was not made voluntarily’.

B. The manner and course of interrogation by the public prosecutor

According to the aforementioned manner and course of the interrogation, from the day after the defendant's arrest until his confession, the prosecutor Yoshimura repeatedly interrogated the defendant at the Shimizu police station, taking turns with the police officers and interrogating him in a pursuing manner, including by mixing false facts that were contrary to the objective state of the evidence, in order to establish the defendant as the perpetrator of the crime in question. When the accused confessed to the public prosecutor on 9 September, the prosecutor did not interrogate at the Shizuoka District Public Prosecutor's Office where he belongs to, but at the same Shimizu Police Station, when the defendant was physically and mentally exhausted from the inhuman interrogations conducted by the police officers in between the interrogations conducted by the police officers before and after him, and he prepared the Defendant's Statement Record to the Prosecutor. Considering the above-mentioned manner of interrogation by the Public Prosecutor, especially the close cooperation with the interrogation by the police officers, it can be said that the Defendant's Statement Record to the Prosecutor was obtained in cooperation with the interrogation by the police officers, and that the Defendant's Statement Record to the Prosecutor also constitutes a ‘confession made under duress, torture or threat’ and it is clear that the confession was ‘suspected confession that was not made voluntarily’.

In contrast, prosecutor Yoshimura testified at the final first instance hearing that during the interrogation on 8 September 1966, after the accused had confessed to the police officers, he told the accused that he did not have to stick to what he had said to the police because the police and the prosecution were different, but that the accused had confessed to this crime and that he had conducted the interrogation without referring to the police officer's report to prepare prepared the Defendant's Statement Record to the Prosecutor. The court of the first instance confirmed the voluntariness of the prosecutor's

report, citing this as a basis. However, given the manner and course of Prosecutor Yoshimura's series of interrogations - where, starting from the day after the defendant's arrest, he pursued the defendant as the perpetrator of the crime alongside the police - and the fact that the content of the Defendant’s Statement Record to the Prosecutor is nearly identical to the police officer’s statement prepared on 8 September 1966, it is clear that, despite the fact that only a clerk from the prosecutor’s office was present during the prosecutor's interrogation, and no police officer was present, the police and the prosecutor were, in effect, taking turns coercing a confession from the defendant. Therefore, even in light of Prosecutor Yoshimura's testimony, the conclusion that the Defendant’s Statement Record to the Prosecutor was obtained in coordination with police interrogation remains unaffected.

C. Voluntariness of the Defendant’s Statement Record to the Prosecutor

As stated above, the Defendant’s Statement Record to the Prosecutor was prepared through inhumane interrogation in which police officers and prosecutors collaborated to force the victim to make a statement by inflicting physical and mental pain, under conditions that substantially violated the right to remain silent and had an extremely high risk of inducing a false confession. The Defendant’s Statement Record to the Prosecutor can be assessed as having been substantially fabricated by the investigating authorities.

The Defendant’s Statement Record to the Prosecutor can therefore be evaluated as a fabrication by the investigative authorities. Therefore, the prosecutor's report in this case constitutes a ‘confession made under coercion, torture or intimidation’ under Article 319(1) of the Code of Criminal Procedure and a ‘confession suspected not to have been made voluntarily’ and cannot be admitted as evidence, and is therefore excluded from the evidence on its own authority under Article 207 of the Rules of Criminal Procedure.

(4) Consideration of the defence attorney’s arguments concerning the defendant’s confession

Based on the Hamada Opinion, the defence argues that the defendant's untruthful confession is a positive indication that the defendant is innocent.

The summary of the Hamada opinion is that, as a result of analysing the defendant's confession statement and the tape recording of the interrogation using statement psychology, the defendant's confession is found to reveal ignorance in the sense that the defendant does not know facts that the true culprit would surely know, and that there is no natural

sequential nature in which the true culprit has stated their memories of the experience, and the defendant's confession positively indicates that the defendant is innocent. However, the Hamada Opinion basically assumes that the true culprit's confession is based on their actual experience, but even in cases where the true culprit confesses, it is conceivable that they may not confess to their actual experience for various reasons and make a statement different from the actual experience, for example, through questioning or guidance by the investigating officer or in accordance with the evidence, the Hamada Opinion cannot be adopted on that premise itself. If there are cases where the true culprit does not make a statement of actual experience, the Hamada Opinion's exposure of ignorance, retrogressiveness, non-experience, etc. cannot be said to indicate that the person making the statement is innocent, and it is a leap of logic to say that the Hamada Opinion's exposure of ignorance, etc. positively indicates the accused's innocence. Therefore, the Hamada Opinion cannot be said to have evidentiary value in showing the innocence of the accused, without examining the specifics of the contents.

According to the above, it cannot be said that the Hamada Opinion has evidentiary value in showing the accused's innocence, and the defence attorney's argument that the accused's confession positively indicates the accused's innocence cannot be adopted.

(5) Summary

As stated above, the Defendant’s Statement Record to the Prosecutor constitutes a ‘confession made under duress, torture or intimidation’ and a ‘suspicious confession that was not made voluntarily’ and is therefore excluded at the court’s authority. In addition, statements made by the accused during the investigation phase denying involvement in the crime in question, which were maintained even under inhuman interrogation conditions, can be evaluated as direct evidence against culpability, but beyond this, the accused's confession cannot be said to have the level of evidentiary value to show the accused's innocence.

Summary of Judgment (Part Three)

2. Consideration of the Prosecutor's argument (Claim②) concerning the Five Items of Clothing

(1) Arguments of the Prosecutor and the Defence

In light of the previous proceedings, including the retrial request hearing, and its significance, we will first examine the Prosecutor's Claim② from the Prosecutor's Claims ① to ③. Claim ② asserts that the Five Items of Clothing discovered in Tank No. 1 of the Factory were worn by the defendant at the time of the crime and were hidden in Tank No. 1 after the incident.

The Prosecutor submitted that, in light of the circumstances and conditions of their discovery and the bloodstains on them, the Five Items of Clothing were found to be the clothing used in the crime, and that the fact that the co-woven fabric of the Iron Blue Trousers was found in the accused's family home determined that the Five Items of Clothing were the clothing worn by the defendant. The prosecutor claims that the Five Items of Clothing were worn by the defendant at the time of the crime and were concealed in Tank No.1 after the incident. It then argues that, with regard to the colouration of the bloodstains on the Five Items of Clothing, the defence's rebuttal evidence does not have sufficient probative force to raise reasonable doubt about the finding of the accused's culpability, since there is a real possibility that the bloodstains on the Five Items of Clothing, which were soaked in miso for over a year in Tank No.1, have a reddish tinge. As for the Honda Expert Opinion, which was used to determine the DNA types of the Five Items of Clothing, etc., it is argued that the credibility of the expert opinion is very poor and that the DNA types determined cannot possibly be derived from the blood on the Five Items of Clothing, etc., and therefore cannot be used as a basis for denying that the Five Items of Clothing were the clothes of the crime, etc. The prosecutor also argues that the defence's claim that the investigating authorities fabricated the Five Items of Clothing and the co-woven fabric of the Iron Blue Trousers is unrealistic and impracticable.

In response, the defence argues that the damage to the Five Items of Clothing and the bloodstains on them indicate that the Five Items of Clothing are not the offending clothing in the case and that they are not the clothing of the accused. It is then argued that if the Five Items of Clothing were soaked in miso for more than a year, the colour of the miso in the fabric would have darkened and no redness would have remained in the bloodstains, and therefore the Five Items of Clothing with a lighter colour in

the fabric and redness in the bloodstains were concealed by someone other than the accused in custody immediately prior to their discovery. It is also asserted that the Honda Expert Opinion detected DNA types derived from the blood in the bloodstains on the Five Items of Clothing, and that the DNA type detected in the bloodstain on the right shoulder of the white short-sleeved shirt did not match the accused's DNA type, indicating that the accused was not the perpetrator. It is also argued that the Five Items of Clothing and the scraps of fabric that were allegedly co-worn with the Iron Blue Trousers were all fabricated by the investigating authorities and should therefore be excluded from the evidence in the case.

(2) Summary of the Court's judgment in respect of the Five Items of Clothing

An overview of the Court's judgment on the five garments is as follows. In other words, according to the facts showing the connection between the five items of clothing and the offence and the accused, it is prima facie inferred that the five items of clothing are the offence clothing in this case and that they are the accused's clothing. However, all of the five garments have bloodstains on them that give the observer a sense of redness, but it is not accepted that the redness would remain on the five garments that have been soaked in miso for more than a year in tank No. 1, but rather that if the five garments were soaked in miso for more than a year in tank No. 1, their bloodstains would lose their redness and turn dark brown. The bloodstains are therefore recognised as having lost their reddish colour and turned dark brown. Therefore, according to the colour tone of the bloodstains on the five garments, it cannot be accepted that the five garments were placed in Tank No. 1 before 20 July 1966, when a large amount of new miso raw material was prepared in Tank No. 1. Therefore, it is virtually impossible for the accused to put the five items of clothing into Tank No. 1 while he was under detention, so the five items of clothing were concealed in Tank No. 1 by someone other than the accused close to the time of their discovery, and the five items of clothing are not the clothes used in the crime in question. In addition, it is practically impossible to envisage anyone other than members of the investigative body fabricating the five items of clothing as criminal clothing, and taking into account the fact that the investigative body was in a situation where it could realistically assume that the five items of clothing would be fabricated, the five items of clothing were fabricated by the investigative body without any connection to the crime in question. The accused's actual condition was not related to the crime in question. The scraps seized from the accused's parents' house were also found to have been fabricated by the investigating authorities, in light of the circumstances in which the scraps were seized and the prosecutor's efforts to prove the

case after the seizure. Therefore, these pieces of evidence are excluded ex officio. On the other hand, the Honda test does not have evidentiary value for identifying individuals by DNA typing, and the results of the Honda test do not support the above decision that the five items of clothing are not the crime clothing in this case and were fabricated evidence by the investigating authorities.

(3) The link between the five items of clothing and the offence and the accused

A. Factual circumstances showing the link between the five items of clothing and the offence in question

(Omitted)

B. Factual circumstances showing the connection between the five items of clothing and the accused.

(Omitted)

C. Examination of the connection between the five items of clothing and the offence and the accused

First, according to the facts showing the connection between the above-mentioned five items of clothing and the crime in question, the five items of clothing were found in tank No. 1 at the plant near Fujio's house about one year and two months after the crime in question, and miso ingredients were newly prepared in tank No. 1 on July 20, 1966, after the crime in question, and after this preparation, the five items of clothing were found in the bottom of tank No. 1. It was found that it was virtually impossible to hide the five items of clothing in the bottom of Tank No. 1 after this preparation, that the five items of clothing had a large amount of blood stains on various parts, and that the blood of several persons, whose blood types matched those of the victims, was on the front of each leg of the iron and dark blue trousers, the rat-coloured sports shirt and the upper part of the right sleeve of the white short-sleeved shirt. It is acknowledged that there was damage to these items of clothing. The circumstances of the discovery of these five items of clothing and others are . The circumstances of the discovery of the five items of clothing indicate the possibility that the victims' blood adhered to the five items of clothing when the perpetrator committed the crime in question, as a result of being exposed to the blood of the victims, and that some of the five items of clothing were damaged as a result of resistance from the victims, and this is a reasonable inference that the five items of clothing were the clothes

used in the crime. However, the blood type match linking the five items of clothing to the crime in question is not as strong as DNA typing or fingerprint identification as personal identification evidence, and when, as in this case, the victims‘ blood types correspond to all ABO blood types, the inference of the crime clothing by matching the victims’ blood types is not as strong as it is in the present case, certain limits to its probative force.

Next, according to the aforementioned facts showing the connection between the five items of clothing and the accused, the accused wore clothing similar to the five items of clothing before the incident in question, but after the incident in question, he did not wear at least the green trousers and the rat-coloured sports shirt, and no clothing similar to the five items of clothing was found among the packages that were sent to his parents' house. No clothing similar to the five items of clothing was found in the luggage sent to the defendant's parents' home; the defendant had a scar on his right upper arm, the area of the scar roughly matching the area of damage on the rat-coloured sports shirt and the white short-sleeved shirt; and bloodstains of the same type B as the defendant's blood type were found oozing from the inside on the damaged area on the white short-sleeved shirt. The factual circumstances linking these five items of clothing to the accused can be said to be prima facie indications that the five items of clothing were worn by the accused.

D. Consideration of the arguments of the defence counsel

In relation to the connection between the five items of clothing and the offence and the accused, the Defence submits the following arguments

A. Defence counsel's argument that Tank No. 1 contained only about 80 kg of miso and that it was impossible to conceal the five items of clothing in Tank No. 1.

Defence counsel argues that it is impossible to hide five items of clothing in Tank No. 1, because there was only about 80 kg of miso in Tank No. 1 at the time of the incident, and according to an experiment conducted by defence counsel, about 8 ok g of miso would only be about 1.5 cm high at the bottom of Tank No. 1.

Indeed, Kazu Iwasaki, an employee, testified at the final first trial that there was more than 80 kg of miso in Tank No. 1 when he conducted an inventory survey on 4 July 1966 after the incident in question, and according to the investigation report and other evidence, he reported the amount of miso in Tank No. 1 as 80 kg based on the above survey.

According to the investigation report and other evidence, he reported that the amount of miso in tank 1 was 80kg based on the above investigation.

However, Kazu Iwasaki testified at the final first instance trial that he had hurriedly taken measurements in the dimly-lit No.1 tank and that although he had a rough idea, there were differences, and at the final appeal trial he testified that he had kept the amount small because it would be bad to have too much during the inventory check, so the figure of 80 kg he testified to was not necessarily accurate. The figure of 80 kg testified to by the said person was not necessarily accurate. On the other hand, Kusuke Mochizuki, who was the manager of the production section of the company in question, testified that the amount of miso at the time of the incident in question was approximately 160 kg, calculated from the account book. This testimony is strongly corroborated by the statements in the shipping slips and other documents that a total of 440 kg of miso in Tank No. 1 was taken out during June. Furthermore, the above testimony of Kusuke Mochizuki is consistent with the testimony of Shinasaku Muramatsu, an employee who removed the plastic sheet from Tank No. 1 and cleaned the edges and outside of Tank No. 1 between around 26 and 29 of the same month, who stated that he thought there was approximately 200 kg of miso left inside Tank No. 1. According to the above testimony of Kusuke Mochizuki, who is a credible witness, and the entries on the delivery slips, it is recognised that there was approximately 160 kg of miso in Tank No. 1 at the time of the incident. Therefore, it cannot be said that it was impossible to hide five items of clothing in Tank No. 1 at the time of the incident based on the results of the above experiment using approximately 80 kg of miso. In addition to the above, Kusuke Mochizuki testified that, assuming a quantity of approximately 160 kg of miso, the centre of Tank No. 1 was to some extent at the bottom, but that the outer wall was about 20 cm or 30 cm deep, and in view of the quantity of approximately 160 kg of miso, there was enough miso to conceal a jute bag containing five items of clothing at the time of the incident in question. In view of the quantity of about 160 kg of the miso, it is recognised that at the time of the incident there was sufficient quantity of the miso to conceal a jute bag containing five items of clothing.

Therefore, it cannot be said that it was impossible to conceal the five items of clothing in Tank No. 1 in light of the amount of the stash in Tank No. 1.

B. Defence counsel's argument that the accused was unable to wear iron-blue trousers at the time of the incident.

The Defence submits that the Accused was unable to wear dark blue trousers at the time of the Incident and that, therefore, the dark blue trousers were not worn by the Accused.

It is true that the accused was unable to wear the iron-blue trousers in the five experiments on 20 November 1971, 26 September 1974 and 18 December 1975, which were carried out at the final appellate court. The final appeal judgment also found that the accused was able to wear the dark blue pants at the time of the incident, on the grounds that the dark blue pants were marked with the standard ‘size 4, type B’ and that the waist circumference of a B body (obese body) was 8 4 cm and 1 cm, but as the defence claims, the ‘B’ on the dark blue pants was not a dimension. However, as the Defence argues, the above finding was clearly erroneous, as the ‘B’ on the iron-blue trousers indicates the colour, not the size.

On the basis of the above, we will examine again whether the accused was able to wear the dark blue trousers at the time of the incident in question. First, according to the results of the verification carried out by the Shizuoka District Court at the second retrial hearing, the inner diameter of the belt used by the accused at the time of the incident was between 72.6 cm and 73.05 cm, using the belt holes that showed the most signs of having been used. Therefore, the accused's girth at the time of the incident is estimated to have been between 72.6 cm and 73.05 cm. According to the relevant evidence, the iron and navy blue trousers were ordered in the size ‘Y Body No. 4’, and the girth of ‘Y Body No. 4’ was 76 cm and the armpit width (length at the base of the thigh) 32 cm (circumference 6 4 cm), both with an error of 1 cm, and the iron and navy blue trousers in the case in question had marks where the girth was packed by approximately It is admitted that there were marks where the girth was stuffed by approximately 3 cm. It is then estimated that the girth of the iron blue trousers was approximately 72 cm to 74 cm.

According to the above, the accused's girth at the time of the incident in question was between 72.6 cm and 73.05 cm, and the girth of the steel-blue trousers was approximately 72 cm to 7 4 cm, so the accused could have worn the steel-blue trousers at the time of the incident in question.

Next, the reasons for the accused's inability to wear the navy blue trousers at the time of each of the fitting experiments in the final appeal trial will be examined. First, the first fitting test was conducted on 20 November 1971, more than five years after the incident in question, and the defendant's weight was 55 kg on 8 November 1965, before the incident in question, 61 kg on 18 October 1966 after his arrest, and 61.5

kg to 62 kg at the time of each fitting test at the final appellate court. It is admitted that his weight increased by 6 or 7 kg after his arrest and at the time of each fitting experiment, compared to before the incident in question. Next, the dark blue trousers were found wrinkled, but according to the testimony and expert opinion of Professor Tonami at the final appeal hearing, which estimated the existence and extent of shrinkage of the dark blue trousers due to immersion in miso, the girth of the dark blue trousers was 6 8.5 cm (curved) or 7 0.3 cm (flat) at the time of the expert opinion. flattened) and that the iron blue trousers had a maximum shrinkage of 5.5 cm and a minimum of 1.7 cm compared to the above estimated values (approximately 72 to 7 4 cm) at the time of the incident in question. In addition, Professor Tonami appraised that when the thread density of the iron and navy blue trousers was measured, the outer fabric of the girth itself showed almost no shrinkage, almost all of the shrinkage was due to apparent shrinkage caused by wrinkles, there was almost no shrinkage in the hem width and the large shrinkage in the girth was probably due to shrinkage in the lining and interlining of the girth The above-mentioned appraisal leaves no room for doubt as to its credibility to the above-mentioned extent. Therefore, according to the above expert opinion of Professor Tonami, the iron blue trousers were found to have shrunk compared to the time of the incident in question as a result of wrinkling of the lining and other parts of the body due to the soaking in miso and other factors.

As stated above, it is considered that the accused was able to wear the navy blue trousers at the time of the incident, and considering the increase in the accused's weight and the shrinkage of the navy blue trousers after his arrest, the accused's inability to wear the navy blue trousers during each fitting experiment was due to his increased weight and the shrinkage of the navy blue trousers. This is supported by the fact that, although there was no significant change in the defendant's weight at the time of each fitting experiment, it was more difficult for the defendant to wear the navy blue trousers in the second fitting experiment than in the first fitting experiment. Therefore, the fact that the accused was unable to wear the dark blue trousers during each of the above fitting experiments does not give rise to any doubt that he was unable to wear the dark blue trousers at the time of the incident in question.

On the other hand, the Defence argues that, based on Professor Sawatari's expert opinion (Sawatari opinion), the width of the armpit of the dark blue trousers was estimated to be between 56.4 cm and 58 cm before they were soaked in miso, and that the width of the armpit of the dark blue trousers was approximately 6 3 cm, which would fit the buttocks of the Accused during the dressing experiments, and that the width of the

dark blue trousers was too small for the Accused's garments. The width of the pants is too small for the defendant's garments.

However, Sawatari's expert estimated the size of the armpits of the trousers before being soaked in miso by calculating the thread density of the unsoaked fabric and the average number of warp threads in the armpits of the 9Tekkoh blue trousers respectively and dividing the average number of warp threads (I O I 5 threads) in the armpits by the thread density of the fabric (I 7.5~I 8.0 threads/cm).

Considering the fact that it has been pointed out that the thread density of the same fabric can vary depending on its part and conditions of use (testimony of Akira Kondo at the final appeal hearing) and that there is no evidence to deny this, Sawatari estimated the size of the armpit width on the basis of the thread density of the co-fabric, which is the hem part. The accuracy of the above figures in the Sawatari Appraisal is questionable. The Sawatari opinion is also inconsistent with the fact that the width of the armpits of the iron blue trousers was manufactured as 6 4 cm and that there is no evidence of stuffing in the armpits. Furthermore, taking into account that the circumference of the accused's upper thighs was 55 cm at the time of the third wearing experiment, there is no doubt that the width of the armpits of the dark blue trousers was an obstacle to wearing the dark blue trousers at the time of the incident in question, in light of Professor Sawatari's above-mentioned expert opinion.

According to the above, the accused was able to wear the navy blue trousers at the time of the incident.

C. Defence counsel's argument that the bloodstain adherence status of the five items of clothing indicates that they are falsified evidence.

The Defence argues that the bloodstain adherence on the five items of clothing indicates that the five items of clothing are fabricated evidence. In other words, a. the large amount of blood on the five items of clothing is unnatural because the victims were stabbed while they were immobile and the perpetrators were not exposed to a large amount of return blood; b. the lack of downward dripping marks of blood on the five items of clothing is inconsistent with the five items of clothing being the clothes of the crime, c. it is unnatural that the white pants have large areas of blood on both legs, while there are no blood stains on the lining fabric of the steel-blue trousers; d. the blood stains on the front of the white short-sleeved shirt appear to have been shaved off by human hands, which is a sign that they were shaved off by the investigating authority; e. the green trousers, but no Type B bloodstains on the iron and navy blue trousers

and white pants are contradictory, and that the bloodstains on these five items of clothing indicate that they are not the clothing of the crime and that they are falsified evidence.

However, with regard to a. above, the Defence's argument that the victims were killed while restrained and unable to move is not based on expert knowledge or judgment, as it is not pointed out in the opinions of the two doctors who autopsied the victims' bodies, nor in the Oshida and Yokoyama opinions which were based on the request of the Defence, as described later in this report. Therefore, it is not based on any expert knowledge or judgment. With regard to point b. above, it is not clear whether the blood, when it adheres to clothing, always causes marks that sag downwards as the Defence claims, and Professor Saito, a forensic scientist, has stated his opinion that the bloodstains on the five items of clothing are extremely natural ways of adhering, based on his experience of observing bloodstains on a large number of items of clothing, There are no expert findings to contradict this, so the bloodstains on the five items of clothing are consistent with the five items of clothing being the clothes used in the crime. With regard to point c. above, the process and storage conditions before the five garments were placed in Tank No. 1 are completely unknown, and since the five garments were placed in jute bags, each rolled up carelessly and soaked in miso, it is quite possible that blood adhered to or penetrated other garments, or that blood or bloodstains were partially washed off. It is conceivable that some of the blood or bloodstains may have been washed away.

In addition, it can be said that the way blood or bloodstains adhere to clothing depends on the properties of the fabric, etc. According to a blood penetration experiment conducted by Professor (then Assistant Professor) Sawatari on trousers, lining and staple fabric, the area of blood on the staple fabric was slightly larger than that on the lining fabric, so it cannot be said that more blood or bloodstains adhere to a jacket than to a pair of underwear. It cannot generally be said that more blood or bloodstains adhere to the jacket than to the underwear. Therefore, the inconsistency between the bloodstain adhesion on the lining of the dark blue trousers and the bloodstain adhesion on the white pants does not immediately raise doubts that the five items of clothing were the clothes used in the crime in question. Furthermore, looking at the bloodstains on the lining of the dark blue trousers and the white pants, it can be said that the bloodstains on the dark blue trousers and the white pants are not unnatural, as the lining of the dark blue trousers also has a reasonable amount of bloodstains on it. With regard to point d. above, the photographs pointed out by the Defence show no evidence that the bloodstains have been shaved off, and the above argument lacks

grounds. With regard to e. above, the fact that no Type B bloodstains were detected on the iron-blue trousers and the white stiché does not immediately indicate that no Type B bloodstains adhered to these items, and it is quite possible that bloodstains adhered only to the green trousers when the clothes were taken off. Professor Saito stated that the bloodstains on the left side of the front of the green trousers looked as if they had been touched by hand and that they had the appearance of blood on the wearer's hands, so the fact that the green trousers had type B bloodstains on them while no type B bloodstains were detected on the iron blue trousers and white trousers cannot be said to be inconsistent.

According to the above, the bloodstains on the five items of clothing do not indicate that the five items of clothing are falsified evidence.

D. Defence counsel's argument that the damage to the rat-coloured sports shirt and the white short-sleeved shirt is unnatural.

The Defence claims that it is unnatural that the rat-coloured sports shirt has only one hole, while the white short-sleeved shirt has two holes.

However, it is accepted that the position of the damage on the rat-coloured sports shirt and the white short-sleeved shirt is generally the same in each of the photographs of the rat-coloured shirt and the white short-sleeved shirt, as well as in the photographs taken during the wearing experiment of these shirts. Professor Saito also stated that, although it is not clear why there is one hole in the rat-coloured sports shirt and two holes in the white short-sleeved shirt, when a garment is damaged from the outside, a situation may arise where there appears to be a discrepancy in the number of holes in the garment, and such damage may occur if the merino shirt is in a warped condition. The Court is of the opinion that such damage can occur, and there are no expert findings to contradict this opinion.

According to the above, the damage conditions of the rat-coloured sports shirt and the white short-sleeved shirt cannot be said to be unnatural.

E. Defence counsel's argument that the bloodstains on the upper right sleeve of the white short-sleeved shirt are unlikely to be bloodstains from bleeding from the wound on the defendant's right upper arm.

Based on Professor Sawatari's expert opinion, the Defence argues that the bloodstains on the upper right sleeve of the white short-sleeved shirt are unlikely to be bloodstains from bleeding from the wound on the accused's right upper arm.

However, Professor Sawatari expressed the above opinion based on experiments with only a fairly limited number of movements, leaving open the possibility of bloodstains adhering due to various other movements, and therefore, based on the above expert opinion alone, no doubt arises that the bloodstains on the upper right sleeve of the white short-sleeved shirt were not made by blood from bleeding from the wound on the right upper arm of the accused. does not arise.

Therefore, it is not inconsistent to assume that the bloodstains on the upper right sleeve of the white short-sleeved shirt were adherent to the blood that bled from the wound on the right upper arm of the accused.

F. Argument that the green trousers in the five articles of clothing did not belong to the accused.

Defence counsel argues that the green trousers found in Tank 1 did not belong to the accused because the green trousers worn by the accused were kept by the accused's brother after the incident in question.

So, to examine the matter, the accused's brother, Kato Minoru, kept the green pants from the accused's luggage at the family home around October 1966, after the accused's arrest, to give to the accused, and offered to give them to the detention centre, but was instructed to give them through the defence counsel, and when he asked the defence counsel, he was told to give only the trousers to the accused. He testified that he took the green trousers back to his home for safekeeping as he was supposed to turn them in. However, the above testimony of Minoru Kato is contradicted by the fact that Kengo Sato and Shogo Sato, who sent the luggage to the accused's parents' house, testified that they did not remember sending green and other coloured pants, that Tomo Hakamada stated that there was no clothing similar to the five items of clothing in the accused's luggage sent by the company in question, and that on 27 October 1966 The above testimony is inconsistent with the fact that the Defence delivered several items of clothing, including trousers, to the Accused, and the above circumstances which led to the delivery of only the trousers are also unnatural and not credible. Therefore, based on the above testimony of Minoru Kato, no suspicion arises that the green trousers worn by the accused were kept by the accused's brother. According to the above, it cannot be said that the green trousers of the five articles of clothing did not belong to the accused.

G. Summary.

According to the above, even in light of the above arguments of the Defence, it can be prima facie inferred that the five items of clothing are the offending clothing in the case and that they are the clothing of the accused.

(4) Reasonable suspicion based on the bloodstains and other colouration of the five items of clothing.

However, if, on the other hand, the bloodstains and other colour tones of the five items of clothing give rise to reasonable suspicion that the five items of clothing were placed in Tank No. 1 before 20 July 1966, when a large quantity of new miso ingredients were prepared in Tank No. 1, it would be practically impossible for the accused to place the five items of clothing in Tank No. 1 while he was under detention. Therefore, the five items of clothing could be suspected to have been hidden in Tank No. 1 by someone other than the accused at some time close to their discovery, and as a result, there could be room for reasonable doubt about the aforementioned inference that the five items of clothing were the clothes of the crime.

Therefore, the following questions are to be examined: whether the five items of clothing can be found to have been placed in Tank No. 1 before 15 July 1966, even in light of the colour tone of the bloodstains etc. on the five items of clothing; in other words, whether the colour tone of the bloodstains etc. on the five items of clothing is such that it raises reasonable doubt about the aforementioned inference that the five items of clothing were the clothes used in the crime in question, and so on. The following questions are to be considered.

A. the colour tone of the bloodstains etc. on the five items of clothing

(b) Whether the colour tone of the bloodstains etc. on the five items of clothing can be identified by means of colour photographs

(Omitted)

(c) Basic principles of colour appearance.

(Omitted)

(d) Explanations by those who observed the bloodstains etc. on the five items of clothing.

(Omitted)

(e) Colour tone of bloodstains on the five items of clothing.

Based on the explanations given by those who actually observed the bloodstains etc. on the five items of clothing described above with the naked eye, the colour tone of the bloodstains on the five items of clothing will be examined.

First, several employees of the company in question stated that the bloodstains on the five items of clothing were brownish-brown or blackish-brown in colour. However, the statements of the employees cannot be said to have been made strictly on the basis of conscious observation of the differences in the shades of the bloodstains on the five items of clothing, and many of the employees stated that there were easily recognisable bloodstains on them, leaving the possibility that there were red, reddish purple or other bloodstains on them. Indeed, some of them stated that bloodstains with a purple discolouration were on them. Then, according to the statements of the employees, although it can be said that the colour tone of the bloodstains on the five items of clothing as a whole gave the impression of brown or blackish brown, the possibility that bloodstains with a reddish tinge were attached to the five items of clothing cannot be ruled out.

Next, looking at the Haruta statement of actual circumstances and the Sato expert opinion, it is stated in the Haruta statement of actual circumstances that reddish purple bloodstain-like adherence was found on the lining of the white trousers, white short-sleeved shirt, green trousers and iron and navy blue trousers, while the Sato expert opinion states that the white pants were dark red or light reddish brown, the lining of the iron and navy blue trousers was light reddish brown or red, and the white short-sleeved shirt and rat-coloured sports shirt had reddish brown blood stains on them. short-sleeved shirt and a rat-coloured sports shirt were described as having blood stains with a reddish-brown colour. Although the possibility cannot be denied that the reddish colour of the Sato expert opinion was accentuated by observation under an incandescent light bulb, the descriptions in both the Haruta Actual Investigation Report and the Sato expert opinion are considered to describe the results of the careful observation of the condition of the five items of clothing, including the colour of the bloodstains, after conducting an inspection or appraisal as a part of his duties, The fact that both of these statements indicate that the bloodstains had a reasonably strong reddish colour in agreement with both of them, mutually enhances their credibility.

The above-mentioned statements of the employees, the Haruta Jitsuseki Inspection Report and the Sato Expert Report, etc., taken as a whole, the bloodstains on the five items of clothing were brown or blackish-brown in colour, giving the observer an impression of brown or blackish-brown, but the white pants had bloodstains of a dark red or reddish purple colour, which gave an impression of a reasonably strong reddish colour, It is reasonable to accept that other clothing also had reddish bloodstains on them.

On the other hand, the Prosecutor did not dispute that the five items of clothing had reddish blood stains on them, but the observations made by the employees and Lieutenant Haruta were made under cloudy skies with inadequate light, and the observation environment could not be said to have been good, and the blood stains on the five items of clothing at the time of their discovery were of the same shade as in Sato's expert report. It is claimed that the bloodstains on the five items of clothing at the time of their discovery had a ‘reddish colour’ under good observation conditions, such as the use of lighting suitable for observation, and that under less favourable observation conditions, such as cloudy weather and insufficient light, they had a strong black and brownish-brown tint.

However, the above argument by the Prosecutor is premised on the unreliability of Lieutenant Haruta's description of the reddish-purple bloodstains on the five items of clothing, and the fact that all of Lieutenant Haruta's descriptions of the colour of the bloodstains were reddish-purple, as the Prosecutor claims, does not immediately cast doubt on the reliability of the above description. It cannot be said that this is a false premise in that respect. In addition, both the Haruta Actual Investigation Report and the Sato Opinion strictly describe the subtle differences in the colour tone of the bloodstains on the five items of clothing.

It is also conceivable that Lieutenant Haruta and Shu Sato focused on the bloodstains on the five items of clothing that remained reddish and described the colour tone of the bloodstains in either the Haruta JIKKEN JIKKEN or the Sato expert opinion, in light of the purpose of their observations, etc. In this way, it can be considered that the difference between the explanations given by the employees and the Sato Opinion, etc., lies not only in the purpose of the observation, etc., but also in the difference in the bloodstains that they focused on and described, and there is no sufficient basis to conclude that the difference lies in the suitability of the conditions of the observation. In addition to the above, taking into account that, as stated above, people have colour constancy to compensate for differences in colouration caused by light sources, it is reasonable to accept that the bloodstains on the five items of clothing

were reddish in colour even when observed under natural light without an incandescent lamp as an auxiliary light source. Therefore, the above argument of the Prosecutor cannot be adopted.

B. Redness of bloodstains on five items of clothing that had been soaked in miso for more than one year

On the basis that the five items of clothing were all found to have bloodstains on them that gave the observer a sense of redness, we examine whether the bloodstains on the five items of clothing that had been soaked in miso for more than one year in Tank No. 1 retain any redness, that is, whether the five items of clothing can be found to have been placed in Tank No. 1 on or before 20 July 1966. (f) The colour of the blood or bloodstains.

(a) Basic findings on the colour change of the blood or bloodstains, etc.

According to forensic literature, the basic findings on the colour change of blood or bloodstains are as follows. That is, fresh blood is dark red, but changes from reddish brown to brown to greenish brown to grey with the passage of time, mainly due to the action of sunlight. This is due to the change of haemoglobin, the blood pigment, to methaemoglobin and then to haematin, but it should also be taken into account that the colour tone can easily change when exposed to acids, alkalis and oxides.

5 Bloodstains are also dark red when fresh, but gradually change colour from reddish brown to brown to greenish brown to grey. The ageing of bloodstains varies markedly depending on the environment of the bloodstain (temperature, humidity, exposure to sunlight, etc.), making it difficult to determine the exact degree of its ageing from the colour tone of the bloodstain.

Furthermore, the opinion of Professor Saito states that changes in the colour tone of bloodstain spots vary widely depending on the amount and concentration of blood, temperature, humidity, exposure to sunlight, pH, moisture content, alcohol content and other storage conditions, and that the colour tone after a certain amount of time is not constant and that the redness is still retained after one or two years or more. The court also stated that it is experienced on a daily basis, and some of the sample samples of bloodstain spots attached to the above-mentioned opinion are in line with this.

According to the above, it is not immediately unnatural for blood or bloodstains to retain their redness after more than one year, and in order

to determine whether the presence of reddish bloodstains on five items of clothing that have been soaked in miso for more than one year is unnatural, it is necessary to examine the effect of the miso soaking environment on the colour tone changes of the bloodstains It is necessary to examine the effect of the miso soaking environment on the colour change of the bloodstains.

(b) Results of the bloodstain soaking in miso experiment

We will now examine the effect of the immersion of the bloodstains in miso on the colour tone change of the bloodstains.

First, with regard to the changes in the colour tone of the bloodstains marinated in miso, there are various experiments conducted by the Defence and others, experiments conducted by Associate Professor Hiroaki Nakanishi (Nakanishi Experiments) and experiments conducted by the Prosecutor in 2021 (2021 Experiments).

A. Various experiments conducted by the Defence

(a) Miso-soaking experiment report dated 14 April 2008.

The Miso-soaking Experimental Report dated 14 April 2008 that, as a result of placing blood on five items of clothing imitating clothing, placing them in a jute bag and soaking them in a mixture of commercial miso and tamari, miso soaked clothing of various shades of colour could be produced depending on the type of miso and the mixture ratio of tamari, and that in less than 20 minutes, Sato The colour, blood and wrinkles were reproduced in less than 20 minutes, similar to the photographs attached to the expert opinion.

(b) Experimental report dated 19 September 2009 on the one year and two month miso soaking experiment.

The report of the experiment in miso soaking for one year and two months dated 19 September 2009 states that blood was applied to five items of clothing that imitated clothing, etc., and placed in jute bags after approximately five hours of natural drying and soaked in red miso for one year and two months, and that the colour of the blood stains on the clothing turned blackish brown one month after soaking in miso, and after one year and two months the colour of the blood stains turned a darker blackish brown than that of the miso. The colour of the bloodstains on the clothes turned blackish brown within one month of soaking in miso, and after one year and two months, the colour became darker blackish brown than the colour of the miso, and the reddish colour disappeared.

(c) Reproduction Miso - Miso Pickling Experimental Report dated 23 September 2000

The Reproduction Miso - Miso Pickling Experimental Report dated 23 September 2010 (Heisei 22) states that miso was produced with reference to the Company's raw materials and that, as a result of soaking five items of clothing in a jute bag in the miso produced, the colour of the bloodstains on the clothing became dark blackish purple and dark brown after approximately six months and the redness disappeared. The colour of the bloodstains on the clothes became dark black-purple and dark brown after about six months, and the redness disappeared, etc.

(d) Experimental reports on the colour change of blood soaked in miso, Part I to IV

The results of the experiments showed that the bloodstains turned black within four weeks of being pickled in miso, although it took more time when pickled in white miso than when pickled in red miso. The results of the experiment showed that the blackening of blood continued even when blood anticoagulants were added, and that the blackening of blood was stronger in the case of the merino weave, where the yarn density was higher than in the satin weave; and The results of the experiment showed that the blood darkened more strongly when jute bags were used, etc.; IV: the results of the experiment showed that blood of different blood types was browned in four days at most when immersed in miso ingredients, etc.

b. The Nakanishi Experiment

The Nakanishi experiment was conducted at the request of the Public Prosecutor, with the aim of assessing the degree of degradation of DNA in human blood soaked in miso, etc. Under the supervision of a brewing expert, the brewing process of tank 1 miso was reproduced as much as possible, and blood on T-shirts was soaked in miso under different conditions, including dried and unseasoned. The photographs attached to the Nakanishi experiment show that the colour tone of the bloodstains, especially on the undried T-shirts after the bloodstains were attached, was reddish, but they all became brown eight days after being soaked in miso, black or brown after 30 days, and black or black-brown after 150 days at the latest, with no reddish colour at all.

c. Experiments in 2021

(a) Purpose and outline of the 2021 experiment

The Prosecutor conducted an experiment (the 2021 experiment) in which bloodstains adhering to a cloth were soaked in miso and the changes in colour tone were observed for a period of approximately one year and two months from September 2021 to November 2022.

The purpose of the 2021 experiment was not to precisely reproduce the conditions under which five items of clothing were soaked in miso in Tank 1, but rather, based on suggestions about factors that might affect the colour tone of the bloodstains obtained in the process of seeking knowledge from experts, to conduct an experiment in which the bloodstains were soaked in miso under different conditions in order to determine whether there was any effect of differences in conditions. The influence of the differences in conditions on the colour tone of bloodstains was observed. The aim of the study is to observe the degree of influence of differences in conditions and to seek expert knowledge on the results.

First, in the 2021 experiment, bloodstains were made by adhering blood (venous blood basically and some arterial blood) from several persons to two types of thick (identification code ‘A’) and thin (identification code ‘U’) knitted cotton cloth (bloodstains with more blood adhering were made by mixing blood from some persons. Identification numbers C5, 6, Ding5, 6, ‘A’, ‘U’, etc., as described below), and these bloodstain-attached cloths were placed in tea bags as a substitute for jute bags, which were used as samples.

Next, with regard to the miso ingredients, the quantity of miso ingredients in tank 1 at the time was used as a reference, and in addition to ordinary tap water (identification code ‘A’, ‘C’), pseudo-well water (water containing a certain concentration of nitrate nitrogen, assuming water contaminated by nitric acid due to fertilisers, etc.; identification code ‘A’, ‘C’) was used. Identification codes ‘B’ and ‘Ding’) were used. Then, bloodstained cloth in tea bags and 2 to 2.5 kg of miso raw materials were placed in nylon polyethylene zip bags for miso making with low oxygen permeability (low-anaerobic environment. A 1 to 5, 11, 13, B 1 to 5, 11, 13 ‘A’ and ‘U’ respectively) and oxygen absorber, vacuum packed by a vacuum packer to suck out the air in the bag and the mouth of the bag crimped by an electric heating wire (high anaerobic environment. The bloodstains were also soaked in miso on the day of preparation (A1, A6, A6, A1 to A4, A1 to A6, A1 to A4, A1 to A6, A1 to A6, A1 to A6, B1 to A6, B1 to A6, B1 to A6) and three days later (A2, A2, B2, A7, B2, B7, B2, B7, B2, B7, B2, B7, B2, B7, B2, B7, B1, B6, B1, B6), 7, B2, 7, B1 1 to 1 4, C1, 5 and Ding 1), 5 days later (A3, 8, 1 5, 1 6, B3, 8, 1 5, 16, C2, 6 and Ding 2), 10 days later (A4, 9, B4, 9, C3, Ding 3 and 5), 18 days later (A5, 10, B5, 10, C4, Ding 4, 6, each ‘a’ and ‘u’), and furthermore, a cloth with blood on it,

washed in water or hot water, was prepared and then soaked in miso, respectively (A1 1 to 14, B1 1 to 14, C1 1 to 4, Ding 1 to 4, each ‘A’ and ‘C’).

The prosecutor shall observe the samples soaked in miso under various different conditions as described above by taking out a part of the samples (from four to 19 samples each) about half a month, one month, one and a half months, two months, two and a half months, three months, four months, five months, six months, eight months, 10 months, one year, one year and two months after the initial soaking in miso, etc. The investigation reports (2021 Experimental Investigation Report) with photographs, etc. of the state of the samples were prepared one after another.

Of the above, the observation of the samples after about six months from the start of the initial immersion in miso was conducted in the presence of the defence counsel, and the observation after about one year and two months was conducted in the presence of two judges and the court clerk at the trial for the second request for a retrial.

(b) Results of the 2021 experiment

From the photographs attached to the investigation report of the FY2021 experiment, it can be confirmed from the samples (A1 and B1 ‘A’ and ‘U’) observed on a total of nine occasions between approximately half a month and approximately six months later that the colour tone of the bloodstains became dark brown or brown over time and lost its redness considerably between the time of immersion in miso and approximately six months later.

However, with the exception of the above-mentioned samples, most of the samples were observed only once (only ‘A’ and ‘C’ in A 1 1 and 1 3 were observed twice), and it is not possible to ascertain the trend of colour tone changes of bloodstains over time under the same conditions based on samples other than the above-mentioned samples. Therefore, the tendency of the colour tone change over time of the whole sample is examined, taking into account the differences in conditions.

Looking at the photographs of each sample after approximately 10 months after being pickled in miso, a reddish colour can be seen in the bloodstains of samples with a large amount of blood attached (‘a’ and ‘u’ in Ding 6), bloodstains that have dried out (‘a’ and ‘u’ in A5, 9 and 10) and bloodstains that have been washed in hot water (‘a’ and ‘u’ in Ding 2 and 4), and according to the photographs above, it can be seen that over time

the There is no trend, such as more brownish or dark brown bloodstains being observed in each sample as time goes by.

However, the photographs taken by counsel of the samples at the time of each observation, which were taken under fluorescent light with a flash, do not show any residual reddish colouration in each of the above-mentioned samples. In addition, the photographs attached to the ‘Confirmation of Experimental Materials (Memo)’ (Confirmation Memo) prepared by the court clerk, which were taken under fluorescent light or incandescent light without flash, do not show any redness in the samples (A5, 10 and D6 ‘A’, ‘C’, etc.).

Therefore, taking into account the limitations of colour photography in reproducing colour tones, and examining photographs that are closer to the colour tone of the samples as actually seen by the naked eye, it cannot be denied that the photographs attached to the 2021 Experimental Investigation Report were taken using incandescent lamps with relatively high red light wavelengths, and that the colour tones are redder than those actually observed with the naked eye. It cannot be denied that this may have resulted in a reddish colour tone that was more reddish than actually observed with the naked eye. Furthermore, in its decision on the second request for a retrial, the trial body, including two judges who actually observed the sample under fluorescent or incandescent light bulbs, stated that, on the premise that the photograph attached to the confirmation memo more accurately reproduced the colour tone of the actual sample, the confirmation memo showed that, with regard to the above sample, the colour tone of the sample was more reddish than that of the sample observed under the fluorescent light or incandescent light bulb in the experimental investigation report for the year 2021. It is clear that the photographs taken by the defence counsel more faithfully reflect the conditions of the samples as confirmed by the naked eye than the attached photographs.

As stated above, taking into consideration the method used to take the photographs attached to the 2021 Experimental Investigation Report and the results of the two judges above in checking the samples with the naked eye, it must be said that the prosecutor took reasonable care to reproduce the colour tone and to verify it after the fact by setting the white balance to incandescent light when taking the photographs and by photographing the samples together with a colour chart. Even taking into account the fact that reasonable care was taken to reproduce the colour tone and to verify it after the fact, it must be said that there remains reasonable doubt that the above-mentioned photographs had a redder colour tone than was actually observed with the naked eye. In this way, it

cannot be accepted that, in addition to the samples after approximately one year and two months, when the above two judges actually observed the samples, the samples after approximately 10 months and after approximately one year, when no reddish colour was observed in the photographs taken by the defence counsel, were taken under the same conditions, and so on.

On the other hand, in the text of the report of the experimental investigation in 2021, the public prosecutor, who was the observer, reported that redness was observed in the samples that had been soaked in miso for a long period of time, around one year. However, in the 2021 experiment conducted by the public prosecutor, it was anticipated that anaerobic conditions and the degree of drying in miso brewing could be a factor that would hinder the dark browning of the bloodstains, so samples with high anaerobic conditions were set up at least twice as long as those with low anaerobic conditions, and samples with a short period between bloodstain preparation and immersion in miso, in other words those that had not yet dried, were observed early. In the setting of the observation conditions and the selection of the samples to be observed, it is undeniable that a method was intentionally adopted whereby redness tends to remain after a long period of immersion in miso was used. The prosecutor's experimental method and the choice of the samples to be observed after approximately one year and two months cannot be denied. Considering the prosecutor's experimental methods and attitude, as well as the two judges' results of checking the samples with the naked eye as described above, the above description in the 2021 Experimental Investigation Report cannot be trusted as it is.

According to the above, as a result of the 2021 experiment, it cannot be accepted that some of the bloodstains remained reddish after being soaked in miso for a long period of time, around one year. In addition, considering the results of the 2021 experiment, it is acknowledged that when bloodstains are marinated in miso, even taking into account differences in conditions, the colour tone of the bloodstains tends to lose redness and become brown or blackish-brown as time passes.

D. Sub-clause.

As stated above, as a result of the experiments on bloodstains soaked in miso, it is acknowledged that bloodstains soaked in miso turn brownish-brown and blackish-brown with the passage of time, and become less reddish in colour tone. The results of the various experiments conducted by the Defence and Nakanishi showed that bloodstains soaked in miso for more than one year did not retain any reddish colour, and that even in the

Prosecutor's 2021 experiment, in which a method was adopted that tended to retain reddish colour, the results showed that bloodstains soaked in miso for a long period, around one year or more, did not retain any reddish colour. The fact that no reddish tint remained on the bloodstains on the clothes soaked in miso for more than one year is a reasonable inference.

However, the situation of bloodstains adhering to the clothes in each of the above experiments, the amount of miso and the brewing conditions differ greatly from the conditions under which the five garments were placed in Tank 1 and brewed, so the results of the above experiments do not immediately give rise to reasonable doubt that bloodstains on the five garments soaked in miso for over a year in Tank 1 would not remain red. The results of the above-mentioned experiments do not immediately give rise to a reasonable doubt that the bloodstains on the five garments soaked in miso for more than one year in tank 1 do not remain red.

Therefore, in the following, after examining the chemical mechanism by which bloodstains soaked in miso turn dark brown based on expert knowledge, we will examine whether redness remains in the bloodstains of clothes soaked in miso for more than one year, taking into account the results of each of the above-mentioned experiments.

(c) Chemical mechanism by which bloodstains marinated in miso turn blackish brown

According to the testimony of Professor Shimizu and others at the retrial trial and at the hearing on the appeal against the second request for retrial, as well as the expert opinion dated 22 October 2021 jointly prepared by both professors, the chemical mechanism by which bloodstains marinated in miso turn dark brown is as follows.

Blood appears red because the haem of haemoglobin, which is contained in large quantities in the erythrocytes of blood, is red. Haemoglobin is a complex of haem, which is iron bound to a porphyrin derivative, and globin protein, which is a protein, with four haem-containing globin proteins bound together. Where heme varies in colour from red to black-purple tones depending on its environment, red heme becomes a compound called haemin or haematin, which shows a brown or blackish-brown colour when the divalent iron ions are oxidised to become trivalent. Haemoglobin shows a dark purple-red colour in the absence of oxygen bound to the iron ions of haem (reduced haemoglobin) and a bright red colour when oxygen is bound to the iron ions of haem (oxygenated haemoglobin). In these states, the iron ions of haem are divalent iron ions,

but divalent iron ions are readily oxidised, and when oxidised to trivalent iron ions, they lose their oxygen-binding function, a state known as brown methaemoglobin. This is known as autoxidation. In vivo, brown methaemoglobin is reduced by reductase and other enzymes (heme is converted from trivalent iron to divalent iron).) and reverts to reduced haemoglobin (dark purple-red), which again has an oxygen-binding function.

The pH of miso is around 6 during preparation and slightly acidic below 5 during maturation, and the general salt content of miso is around 10%. When clothes with bloodstains are stored in miso, the low pH and high salt concentration of the miso can cause haemolysis, e.g. damage to the cell membranes of red blood cells. As mentioned above, haemoglobin or pem becomes brown methaemoglobin, brown or black haemin by oxidation, whereas haemoglobin, which has lost its protective membrane due to haemolysis of red blood cells, becomes more susceptible to the low pH and high salt concentration of the miso and the globin proteins that protect the haem against oxidation Denaturation and degradation of the globin protein, which protects heme from oxidation, is accelerated. The heme is then released from the globin protein as a result of the denaturation and further oxidation is accelerated, and hemin is formed as a result of the oxidation of the heme. As a result, a brownish-brown colour tone due to methaemoglobin or haemin becomes stronger. In addition to such further oxidation and denaturation, the decomposition of globin protein, haem and haemin proceeds through the action of enzymes in the micro-organisms contained in the miso and natural degradation, and the colour of coloured haem or haemin degradation products is also added to the colour mixture, resulting in the principle of subtractive colour mixing, i.e. that when various colours are mixed, the final colour is changes from brownish-brown to blackish-brown according to the principle of black colouration.

Furthermore, globin proteins are broken down by proteases present in the miso into peptides and amino acids, which undergo a Maillard reaction with reducing sugars in the miso. The Maillard reaction is a general term for a series of reactions that occur between amino groups such as proteins and carbonyl groups such as sugars. The Maillard reaction can be divided into three stages: early, middle and late stage. In the late stage, carbonyl compounds react with amino acids to produce brown melanoidins and other compounds. The formation of brown melanoidins, etc. by such Maillard reactions leads to further colour mixing, and the colour changes from blackish brown to blackish brown and the reddish colour is lost.

The above-mentioned view of Professor Shimizu and his colleagues on the chemical mechanism of the darkening of bloodstains marinated in miso is supported by the results of the experiments conducted by them, and the witnesses requested by the Prosecutor, Professor Ikeda and Professor Kanda, did not express any contrary opinion, and can be fully trusted.

(d) Whether bloodstains on clothes soaked in miso for more than one year retain a reddish colour

Based on the chemical mechanism by which bloodstains darken after being soaked in miso, the following is a summary of the opinions of Professor Kanda and his colleagues, Professor Shimizu and his colleagues, and Professor Ishimori, who prepared the joint expert opinion, on whether or not the bloodstains on clothes soaked in miso for more than one year retain a reddish colour.

(a) Opinion of Prof Kanda et al.

The view of Professors Shimizu et al. and Ishimori that bloodstains on clothes that have been soaked in miso for more than one year do not retain a reddish colour has no basis and such a proposition has not been scientifically proven.

First, bleeding blood contains fibrin, and red blood cells adhering to the cloth coagulate with fibrin, causing the red blood cells to clump together, and the coagulated red blood cells are less susceptible to haemolysis due to the effect of coagulation and other environmental factors such as oxygen concentration, pH and salt concentration, so the bloodstains' The degree of drying affects the rate of chemical reactions such as haemolysis and haemoglobin denaturation, which are factors that inhibit their dark browning. However, the view of Prof Shimizu et al. does not take into account the effect of the degree of drying of the bloodstain on the rate of chemical reactions.

The rate of oxidation of hemoglobin depends not on the absolute amount of oxygen but on the concentration of oxygen, and the oxygen in the miso during brewing is consumed mainly by the yeast, which may take 2 to 3 weeks, a month at the most, or even earlier by the yeast. As a result, there may be almost no oxygen inside the miso during brewing. Therefore, in order to examine the rate at which bloodstains turn dark brown, it is necessary to consider the low oxygen concentration in the brewed miso and its effect on the oxidation rate, but these factors are not

properly considered or examined in the respective opinions of Professor Shimizu et al. and Professor Ishimori.

Furthermore, some microorganisms such as yeast, lactic acid bacteria, and Bacillus subtilis in brewed miso produce nitric oxide (NO) or carbon monoxide (CO), which may cause the retention of redness.

As described above, Prof. Shimizu et al. and Prof. Ishimori's opinions fail to properly consider the factors that inhibit the darkening of bloodstains, and they fail to provide scientific evidence that bloodstains on clothes soaked in miso for more than one year do not retain their reddish color.

a. Opinion of Prof. Shimizu et al.

Under the environment of immersion in miso, hemolysis, denaturation and oxidation of hemoglobin progress due to the low pH and high salt concentration of the miso, etc., as well as degradation of heme and hemin progress over a medium period (several days to several weeks), and the color changes from brown to dark brown by the mixture of heme, hemin and their decomposition products, The reddish color is lost. In addition, over a long period of time (from several weeks to about six months), the color mixing progresses further due to further denaturation, degradation, and oxidation of hemoglobin and other substances, as well as the formation of brown melanoidin by the Maillard reaction, resulting in a dark brown to blackish brown color tone. When clothing with bloodstains is stored in miso for such a medium to long period of time, it is impossible for the bloodstains to retain their reddish color, and the bloodstains on clothing that has been soaked in miso for more than one year will not retain their reddish color.

The phenomenon of bloodstains on clothes that have been soaked in miso for more than one year remaining reddish is a rare event that deviates from the universal phenomenon that blood that has left the body (bloodstains) lose their reddish color over time and change from brownish to blackish tones. However, Prof. Kanda et al. only repeat the abstract possibility theory that the reddish color remains, which is not scientifically disproved. In addition, Prof. Kanda et al. state that an anaerobic environment where oxygen is scarce is not taken into account, but the low pH and high salt concentration of miso, as well as the denaturation and decomposition of hemoglobin by proteases in miso, proceed independently of oxygen. Furthermore, the decrease in oxygen concentration in miso brewing occurs gradually, and it takes half a month to a month to reach an anaerobic environment, during which there is sufficient oxygen. In addition, human blood itself contains enough oxygen

to oxidize most of the heme molecules in it, and even if there is no oxygen in the blood, there is enough oxygen in the air to oxidize all of the heme molecules in the same amount as in the blood, as well as in the miso ingredients and in the miso that has been brewed. There is also dissolved oxygen in the raw materials of miso and in the miso that has been brewed. Thus, there is sufficient oxygen for the oxidation of hemoglobin in the process of miso brewing. According to the above, although the low oxygen concentration in miso may delay the dark browning of bloodstains, it does not affect the conclusion that bloodstains lose their reddish color when viewed over a span of one year or more.

Furthermore, Professor Kanda and his colleagues point out that the degree of drying of the bloodstain is a factor that inhibits dark browning, but although chemical reactions are generally slower in the solid phase than in the liquid phase, if moisture reaches the bloodstain, chemical reactions such as denaturation and oxidation of hemoglobin will proceed, so that the sludge exuded in the process of miso brewing will penetrate Therefore, the drying of the bloodstain is not an essential problem that would affect the conclusion when viewed over a span of one year or more. In addition, taking into consideration the fact that the denaturation of hemoglobin progresses during the drying process of the bloodstain and that methemoglobin and other substances are produced, resulting in color mixing, it is not necessarily a factor that delays the dark browning of the bloodstain. This is supported by the fact that experiments using sarashi and meriace knitted fabrics have confirmed that the color change of bloodstains is the same as that of blood. Even in light of the other findings of the Joint Expert Report, such as the effects of microorganisms, the conclusion that the bloodstains turn dark brown when immersed in miso for more than one year remains unchanged.

a. Professor Ishimori's opinion

The view of Prof. Shimizu et al. that bloodstains on clothes soaked in miso for more than one year do not leave a reddish tint is supported. Since hemoglobin functions in vivo, it denatures immediately when it leaves the body and its environment becomes denatured. In the process of drying of bloodstains, it is also normal for hemoglobin denaturation and the accompanying release of heme to occur when red blood cells leave the body, hemolysis occurs, and drying occurs. Furthermore, the low pH and high salinity of the miso soaking environment greatly accelerate the denaturation of hemoglobin and facilitate the release of heme. When hemoglobin is denatured, the oxygen affinity increases because the globin protein, which protects heme from oxidation, loses its function, and when only heme is left, the oxygen affinity increases further. Analysis of the

oxidation reaction of hemoglobin has shown that pH is the factor that determines its oxidation rate, and at low pH, such as in a miso soaked environment, the oxidation reaction proceeds about 10000 times faster than the pH in red blood cells, 10000 times faster for denatured hemoglobin, and 10000,000 times faster for heme. The oxidation reaction proceeds about 100,000 times faster in the case of denatured hemoglobin. According to the rate of oxidation of hemoglobin and heme, it is impossible for heme and hemoglobin in bloodstains that have been soaked in miso for more than one year to be in a reduced state with reddish color, even if the low oxygen concentration of miso in the brewing process is taken into account. In addition, although bloodstains and blood are in different states and react chemically at different rates, even if they are solid like bloodstains, moisture can penetrate into their interior, allowing moisture with dissolved oxygen to reach the heme iron in hemoglobin, and since hemoglobin or heme is oxidized, the bloodstain will turn brown if there is moisture in the surrounding area Prof. Shimizu et al.'s view is scientifically correct.

b. Examination

Based on each of the above findings, we will examine whether or not bloodstains on clothing that has been soaked in miso for more than one year retain a reddish color.

First, Professors Kanda et al. and Shimizu are all forensic experts with extensive experience, Assistant Professor Okuda is an expert in forensic medicine and chemistry, and Professor Ishimori is a chemistry expert who studies the function, structure, and reaction of proteins including heme, such as hemoglobin, etc., and all have sufficient All of them have sufficient qualifications and abilities as experts. Therefore, to examine specifically the contents of each of the above opinions, Professor Shimizu et al. stated their opinion that bloodstains on clothes soaked in miso would change from dark brown to blackish brown in color approximately six months after soaking in miso, due to the aforementioned chemical mechanism. This view of Prof. Shimizu et al. is considered to be based on the rule of thumb that in vitro blood or bloodstains usually lose their reddish color and change from brownish brown to blackish brown, as well as the expert knowledge and rule of thumb regarding the speed of chemical reactions, including the Maillard reaction, that turn bloodstains dark brown after being soaked in soybean paste. However, the view of Prof. Shimizu et al. does not provide sufficient evidence that the chemical reaction, in which the reddish color disappears due to the denaturation, oxidation, and Maillard reaction of hemoglobin, occurs within about six months or a year after the bloodstains are soaked in miso. Although the

results of the experiments conducted by Prof. Shimizu and his colleagues and by Assistant Prof. Okuda accurately support the chemical mechanism by which blood or bloodstains turn dark brown under low pH and high salinity conditions, they do not immediately support that a chemical reaction occurs within about six months or a year after immersion in miso and that the bloodstains lose their reddish color. However, it does not immediately support the fact that bloodstains lose their redness due to a chemical reaction within about six months or a year under miso soaking.

However, Prof. Ishimori stated that the low pH and high salinity in the miso soaking environment greatly accelerate the denaturation of hemoglobin, etc., the oxygen affinity of denatured hemoglobin increases, and the low pH accelerates the oxidation rate of hemoglobin and heme, etc., in light of the rates of hemoglobin denaturation, heme, and hemoglobin oxidation in the miso soaking environment. In light of the rate of oxidation of hemoglobin, etc., it is our opinion that the heme and hemoglobin of bloodstains soaked in miso for more than one year cannot be in a reduced state with reddish color, and we find no expert knowledge to reject such an opinion on the rate of chemical reaction. Professor Ishimori's view, based on such speed of hemoglobin denaturation, heme and hemoglobin oxidation, etc., is based on the judgment process of the above view of Professor Shimizu et al. which assumes that these chemical reactions will progress reasonably well by about six months after immersion in miso, and the conclusion of Professor Shimizu et al. that blood stains on clothes soaked in miso for over one year do not leave reddish stains. The conclusion of Prof. Shimizu and others is strongly supported by the fact that the blood stains on the clothes soaked in miso for more than a year do not remain reddish. Furthermore, Professor Ikeda, a witness for the prosecution, based on his own research on hemoglobin and his extensive experience as a forensic scientist, testified that, in general, blood stains on clothes soaked in miso for more than one year do not leave a reddish tint, which is also consistent with the above opinion of Prof. Shimizu and others. In addition to the above, the results of the various experiments conducted by the defense attorneys and the Nakanishi experiment showed that bloodstains soaked in miso for more than one year did not retain redness, and that even in the 2021 experiment, in which a method that tends to retain redness was adopted, the results of bloodstains soaked in miso for around one year were not confirmed to have retained redness, which is consistent with the above opinions of Prof. Shimizu et al. This strongly supports the above opinions of Prof. Shimizu et al. and Prof. Ishimori.

On the other hand, as mentioned above, Professor Kanda expressed the opinion that, depending on the degree of drying of the bloodstains and the

oxygen concentration of the miso during brewing, chemical reactions may not occur or the speed of chemical reactions may slow down, so that the bloodstains may remain reddish even if they have been soaked in miso for more than one year, and Professors Miyashi and Kondo Prof. Miyashi and Prof. Kondo also expressed the same opinion.

Therefore, we will first examine the effect of the degree of drying of the bloodstain on the darkening of the bloodstain. Although it can be said that chemical reactions are slower in solid bloodstains than in liquid blood, Shimizu et al. and Professor Ishimori argue that the drying of bloodstains does not necessarily delay the dark browning of bloodstains because the denaturation of hemoglobin, the release of heme, and the oxidation of hemoglobin and heme also proceed during the process of bloodstaining. In addition, the degree of drying of the bloodstain does not affect the conclusion that the bloodstain has been immersed in miso for more than one year, because chemical reactions such as the denaturation and oxidation of hemoglobin proceed even in bloodstains once moisture reaches the bloodstain. The above view is sufficiently reasonable in light of the chemical mechanism by which bloodstains turn dark brown. The fact that the above chemical reaction proceeds when moisture reaches the bloodstain and the bloodstain turns dark brown is also supported by the results of experiments conducted by Assistant Professor Okuda, in which the bloodstain was made on a sarashi or merillas knitted fabric.

According to the above, the degree of drying of the bloodstains does not necessarily delay the browning of the bloodstains, and it is considered that the degree of drying does not hinder the browning of the bloodstains when they are soaked in miso for one year or more.

Next, we will examine the effect of the degree of oxygen concentration in the miso during brewing on the dark browning of the bloodstains.

Since the oxidation rate of hemoglobin depends on the oxygen concentration, a low oxygen concentration in brewed miso is considered to be a factor that delays the dark browning of bloodstains. However, even if the brewed miso has a low oxygen concentration, there is oxygen necessary to oxidize all the hemoglobin in the bloodstain during the brewing process in the raw materials of the miso, etc. In addition, Professor Ishimori stated that the low oxygen concentration of the brewed miso, when fully taken into account the speed of hemoglobin denaturation and oxidation of hemoglobin and heme, etc. Professor Ishimori also stated that, taking into consideration the low oxygen concentration of miso during the brewing process, it is impossible for the hemoglobin and

hemoglobin of bloodstains to be in a reduced state, retaining their reddish color, after being soaked in miso for one year or more.

Then, in light of Professor Ishimori's above view, etc., the low oxygen concentration of the brewing miso is considered not to be a factor preventing the bloodstains from turning dark brown when soaked in miso for at least one year. This is supported by the results of the bloodstain soaking experiment (see (a) above), which showed that bloodstains soaked in low oxygen concentration brewing miso turned dark brown within one year. On the other hand, Prof. Kanda and his colleagues state that there is a possibility that the koji mold consumes all the oxygen in a shorter period than two to three weeks and that there is almost no oxygen inside the brewing soybean paste, but this is only one possibility and based on the findings on soy sauce mash, which is a liquid. However, this view is based on the knowledge of soy sauce mash, which is a liquid, and there is no expert knowledge or data that this view is valid for the brewing of miso, which is a semi-solid.

In addition, Prof. Kanda and his colleagues also mention the influence of microorganisms in miso, but all of them only point out the possibility.

According to the above, it is difficult to assume that the bloodstains on the clothes soaked in miso for more than one year would remain reddish, even if the drying of the bloodstains and the low oxygen concentration of the brewed miso are taken into consideration. However, taking into consideration the views of Professor Kanda and others, it cannot be denied that the bloodstains may remain reddish after being soaked in miso for more than one year if, for example, the dried bloodstains are soaked in miso under conditions where moisture cannot penetrate into them, or if the bloodstains are soaked in miso under extremely low oxygen concentration, which is not expected in the normal miso brewing process. Therefore, the possibility that the bloodstains may remain reddish after being soaked in miso for over a year cannot be denied. Therefore, it cannot be said that bloodstains on clothes soaked in miso for more than one year will lose their reddish color under all conditions.

b. Summary

Based on the above, in light of the aforementioned opinions of Professors Shimizu and Ishimori, as well as Professor Ikeda's opinion and the results of the miso soaking experiment, it is recognized that bloodstains on clothes soaked in miso for more than one year usually do not remain reddish, but instead lose their reddish color and turn dark brown. In fact, bloodstains soaked in miso for more than one year lose their reddish color

and turn dark brown. However, in light of the opinions of Professor Kanda and others, it cannot be said that the bloodstains on the clothes soaked in miso for more than one year lose their reddish color under all conditions. In determining whether the bloodstains on the five garments soaked in miso for more than one year in Tank No. 1 lose their reddish color, it is necessary to further examine whether there are circumstances that prevent the bloodstains on the five garments from losing their reddish color and turning dark brown, taking into consideration the specific facts of the case, including the conditions of the five garments and the brewing conditions of Tank No. 1.

(e) Whether or not the bloodstains on the five garments soaked in miso for more than one year in Tank No. 1 retain their reddish color, etc.

Therefore, we will examine whether there are circumstances that prevent the bloodstains on the five garments from losing their reddish color and turning dark brown in light of the specific facts of the case, including the conditions of the five garments and the brewing conditions of Tank No. 1, taking into consideration the opinions of Professor Kanda and others.

First, we will examine the possibility that the degree of drying of the bloodstains on the five articles of clothing and the degree of penetration of moisture into the bloodstains prevented the bloodstains from darkening to a dark brown color.

If the five items of clothing are the clothes used in this case, and if they were hidden in Tank No. 1 after the crime, it would be about 20 days from June 30, 1966, when the incident occurred, to July 20, 1966, when new miso ingredients were stored in Tank No. 1. However, in light of the course of the investigation of this case, which started on June 30 of the same year when the bodies of the four victims were found with numerous stab wounds, and the search of the Factory was conducted on July 4 of the same year, it is not clear that the perpetrators of this case were able to conceal their clothes during the period other than immediately after the occurrence of this incident, even though their clothes were not found by the investigating authorities. It is difficult to believe that the perpetrator in this case would hide the clothes in Tank No. 1 of the Factory, which was suspected to be related to the case, at the risk of being discovered by police officers and employees, even though the clothes had not been found by the investigative authorities. Therefore, assuming that the five items of clothing were concealed during the above-mentioned period, it is very likely that it was immediately after the occurrence of the Incident. If the five items of clothing were concealed in the brewed soybean paste in Tank No. 1 immediately after the incident, it is unlikely that the blood or

bloodstains would have sufficiently dried in the approximately 20 days before the new soybean paste ingredients were prepared, in light of the conditions of the five items of clothing, which were covered in soybean paste containing approximately 50% moisture and placed in a jute bag. Therefore, the bloodstains on the five articles of clothing were not sufficiently dried. Therefore, it is difficult to assume that the bloodstains on the five articles of clothing were soaked in the miso raw material in a sufficiently dry state. In addition, miso raw material contains the same amount of moisture as miso, and based on this assumption, Professor Ishimori and Assistant Professor Okuda stated their opinion that when approximately 8 tons of miso raw material was prepared, the five items of clothing placed in the bottom of Tank No. 1 were in a state where the moisture contained in the miso raw material permeated through the pressure of the miso raw material, etc. The above opinion is reasonable. The above opinion is reasonable and sufficiently credible.

Therefore, it can be said that the bloodstains on the five items of clothing were in a situation where the moisture of the miso raw materials could fully penetrate after a total of approximately 8 tons of miso raw materials were brewed on July 20 and August 3 of the same year. Furthermore, as the fermentation of miso progresses, a liquid tamari is generated, and since the tamari is unevenly distributed in the upper and lower parts of the miso during the brewing process as a result of weights being placed on it, the bloodstains on the five articles of clothing were in a condition where moisture could fully permeate through the tamari generated in the brewing process. In fact, looking at the condition of the five garments at the time they were found, the entire jute bag was wet and damp, and when lifted, dark brown juice was dripping from the bag.

According to the above, it is difficult to assume that the five garments were soaked in the soybean paste when the bloodstains were sufficiently dried. Even if the bloodstains were dried, the moisture of the soybean paste and the tamari could reach and penetrate the bloodstains of the five garments in Tank No. 1 sufficiently. Therefore, the degree of dryness of the bloodstains on the five garments and the degree of moisture penetration into the bloodstains were not recognized as factors that prevented the bloodstains from turning dark brown.

Next, we will examine the possibility that the low oxygen concentration at the bottom of Tank No. 1 prevented the bloodstains on the five garments from turning dark brown.

Tank No. 1 is a concrete tank about 1.6 m deep, and the anaerobic level of miso during brewing is higher at the bottom of the tank than at the top

where it is in contact with the air, so the oxygen concentration at the bottom of Tank No. 1, where the five items of clothing were hidden, is considered to have been lower than at the top. However, although the exact value of oxygen concentration in semi-solid miso is unknown, Professor Ishimori, referring to descriptions in the literature regarding the oxygen concentration in sake, which also consumes oxygen by yeast, concluded that even if miso under brewing had the same low oxygen concentration of about 5 ppb as sake, the speed of hemoglobin denaturation, heme and hemoglobin oxidation, etc. under miso brewing would be lower than that of sake. Even if the oxygen concentration of miso during brewing is as low as 5 ppb, which is the same as that of sake, the oxidation of hemoglobin, heme, and hemoglobin will progress within one year in light of the rate of oxidation of hemoglobin and hemoglobin under miso brewing. In addition, there is no expert knowledge indicating that the oxygen concentration of brewed miso, which is semi-solid and contains gas, is lower than that of sake, which is a homogeneous liquid, and even though tank No. 1 was covered with a board and weights were placed on it, and miso was stepped on during the preparation of miso ingredients, the top part was in contact with the air, Considering the fact that the depth of tank No. 1 is only about 1.6m, it cannot be admitted that the oxygen concentration at the bottom of tank No. 1 was lower than that of sake.

Moreover, the bloodstains on the five items of clothing were kept in the environment with sufficient oxygen inside and outside of tank No. 1 for about 20 days until the miso ingredients were prepared in the No. 1 tank, and the oxidation of hemoglobin or heme in the bloodstains was considered to have progressed reasonably during that time. In addition, even after miso ingredients are prepared, the decrease in oxygen concentration occurs gradually as the yeast consumes oxygen. Therefore, it is considered that the oxidation of hemoglobin or heme in the bloodstains progressed in a non-anaerobic environment during the period of about one month after the miso ingredients were prepared in Tank No. 1.

According to the above, although it can be said that the oxygen concentration at the bottom of Tank No. 1 was lower than that at the top of the tank, the bloodstains on the five clothing items had undergone chemical reactions leading to dark browning before fermentation of the brewed miso proceeded and the oxygen concentration in Tank No. 1 became lower, and even after fermentation progressed and the environment became anaerobic Even after the fermentation progressed and the environment became anaerobic, the oxygen concentration was not low enough to prevent the bloodstains from turning dark brown after

more than one year of soaking in soybean paste. Therefore, the low oxygen concentration at the bottom of Tank No. 1 was not a factor that prevented the bloodstains on the five items of clothing from darkening in color.

Furthermore, the possibility that the Maillard reaction was inhibited by the miso brewing conditions in Tank No. 1, thereby preventing the bloodstains from darkening to a brownish-black color is considered.

According to the brewing conditions of Tank No. 1, such as natural brewing which does not allow the temperature to rise easily, and the statements of the employees at that time, the miso in Tank No. 1 was a light yellowish-brown color for red miso. Then, the color of the miso in tank No. 1 was light yellowish brown. However, on the other hand, although the color of the miso in Tank No. 1 was light as red miso, it could be said that the miso had been brewed for more than one year and had matured, and that the dark brown juice was dripping from the jute bag when it was found. However, the miso had been brewed for more than a year and had matured, and the dark brown juice was dripping from the jute bag when it was found, it was recognized that the miso in tank 1 had also generated melanoidin and other substances due to Maillard reaction. Therefore, the blood stains on the five articles of clothing in the same environment as the miso also underwent a Maillard reaction, and it is considered that brown melanoidin, etc. were generated in a reasonable amount.

According to the above, even considering the brewing conditions in Tank No. 1, the bloodstains on the five garments that had been soaked in miso for more than one year in Tank No. 1 were considered to have generated brown melanoidin and other substances by the Maillard reaction, and the color of the bloodstains was considered to have become mixed with other substances. Therefore, it cannot be concluded that the miso brewing conditions, etc. in Tank No. 1 were factors that prevented the bloodstains on the five garments from turning dark brown.

Based on the above considerations, it cannot be said that there were circumstances that prevented the bloodstains on the five items of clothing from losing their reddish color and turning dark brown, even based on the specific facts of the case, such as the conditions of the five items of clothing and the brewing conditions in tank No. 1. Therefore, it is not recognized that the five garments soaked in miso for more than one year in Tank No. 1 would retain their reddish color, but rather, if the five garments were soaked in miso for more than one year in Tank No. 1, their bloodstains would lose their reddish color and turn blackish brown.

(f) Argument of the Prosecutor

The prosecutor's argument, based on the views of Professor Kanda and others, is generally that there is no basis for the respective views of Professor Shimizu and others and Professor Ishimori, and that there remains a realistic possibility that the bloodstains that have been soaked in miso for over a year will remain red, and that there is no reason for this based on the aforementioned examination that also takes into account the views of Professor Kanda and others, as already explained. Professor Kanda's and others' views are also taken into consideration. However, we would like to supplement our discussion below with some points that were not explicitly mentioned in the above discussion.

First, the prosecutor argues that, based on the totality of the indirect facts pertaining to the prosecutor's allegations (1) through (3), it is strongly inferred that the defendant is the culprit in this case, and therefore, unless the possibility that the blood stains on the five pieces of clothing soaked in miso for over a year would remain red is denied, the possibility that the five pieces of clothing were hidden in Tank No. 1 before July 20, 1966, cannot be ruled out. The possibility that the five items of clothing were concealed in Tank No. 1 before July 20, 1966 is undeniable, and there can be no reasonable doubt in the finding that the defendant is the murderer.

However, the strong inference of the defendant's culpability is based on the fact that the five items of clothing were the clothes used in the crime and that the defendant hid the five items of clothing in Tank No. 1 after the crime. In order to find the above-mentioned facts, it is necessary to prove beyond any reasonable doubt that the blood stains on the five items of clothing soaked in miso for more than one year leave a reddish tint, but as mentioned above, it is not admitted that the blood stains leave a reddish tint. Therefore, the above argument by the Public Prosecutor cannot be adopted.

Next, the public prosecutor stated that Professor Ishimori, in the second appeal against the ruling on the appeal, reported that in the experiment using sake, the oxygen concentration was about O'. However, there are no experimental results showing that the oxygen concentration in sake is 0.1%, and it is also unnatural and unreasonable for Professor Ishimori to explain that the purpose of his testimony is that the oxygen concentration in sake is 0.1% lower than the initial oxygen concentration.

However, it is clear from the testimony itself that Professor Ishimori's testimony is a rough indication of the oxygen concentration in the liquid of

sake, which is replaced by the oxygen concentration in the gas. In addition, the prosecutor's assertion is not a footnote and does not affect the credibility of the core of Professor Ishimori's opinion, since it is irrelevant to the rationality of the above opinion based on Professor Ishimori's expert knowledge. In addition to the above, the prosecutor claims that Professor Ishimori's testimony is unreliable, but he has failed to point out the irrationality of Professor Ishimori's view itself or to present any expert knowledge to deny it, and his argument contains nothing that could affect the rationality of Professor Ishimori's view. Based on the above, it can be said that Professor Ishimori's above view is sufficiently credible in light of the prosecutor's arguments.

Furthermore, the public prosecutor argued that the oxygen concentration at the bottom of Tank No. 1 may have been less than 0.01%, and assuming that the oxygen concentration is proportional to the rate of hemoglobin oxidation reaction, if the oxygen concentration goes from 20% in the air to 1/200th, a simple calculation shows that the hemoglobin oxidation reaction that requires 3 days in the air would take 6 O-O days. would take 6 O-O days, and it is argued that this implies that the oxygen concentration may leave a reddish tint on the 5-point clothing. However, it is not admitted that the oxygen concentration at the bottom of Tank No. 1 was less than 0.01%, and the prosecutor's argument above is based on the oxidation rate of undenatured hemoglobin, which is easily denatured in a miso soaked environment and the oxygen affinity of denatured hemoglobin is increased. Therefore, it is not a useful estimation.

In addition, the prosecutor argues that the results of the 2021 experiment, which confirmed that many of the samples had a reddish tint, suggest that the bloodstains on the five clothing items may also have a reddish tint, depending on the conditions.

However, as stated above, the prosecutor's argument is premised on the fact that the 2021 experiment did not find any samples that had been soaked in miso for a long period of time (around one year) to retain reddish tints.

The 2021 experiment was not intended to precisely reproduce the conditions under which the five garments were soaked in miso in Tank No. 1, but rather to observe whether or not and to what extent the different conditions had an effect, and since conditions such as the amount of miso, the amount of moisture in contact with the bloodstains, and the oxygen concentration were very different from those in Tank No. 1, even if the individual samples were soaked in miso for a year or so, the results of the experiment would still be different. Therefore, even if there is

a result of reddish stain on an individual sample, it does not mean that the result immediately suggests the possibility of reddish stain on the bloodstain of 5 items of clothing.

(k) Minor Conclusion

According to the above, it is not recognized that the five garments soaked in miso for more than one year in Tank No. 1 would retain reddish color, but rather, if the five garments were soaked in miso for more than one year in Tank No. 1, their bloodstains would lose their reddish color and turn dark brown.

C. Color tone of the fabric of the five garments

Next, we will examine whether the color tone of the fabric of the five garments is unnatural as if they had been soaked in miso for more than one year. According to the above statements of the employees, it is admitted that the fabric of the five garments was dyed light brown by miso at the time of their discovery.

However, as mentioned above, the miso in Tank No. 1 was a light yellowish-brown color for red miso, so it is not immediately unnatural that the fabric of the five items of clothing was light brown in color.

There was approximately 160 kg of residual miso in Tank No. 1, and although the possibility that the residual miso was dark in color cannot be denied, Professor Kazuo Higashi, an expert on brewing, stated that if a large amount of fermented miso was added to the residual miso, the tamari of the fermented miso would soak into the residual miso and the color of the residual miso would be the same shade as that of the fermented miso. There is no doubt about the credibility of this opinion. Therefore, even if the remaining miso in Tank No. 1 is dark in color, it is considered that the tamari soaks into it during the brewing process, and it is dyed to a light yellowish-brownish color.

On the other hand, based on the color photographs of the five garments, defense counsel argues that the fabric color of the five garments at the time of discovery was light beige or light brown, which is unnatural for garments that had been soaked in miso for more than one year. However, as mentioned above, there are limitations in recognizing the color tone of the five garments based on the color photographs of the five garments.

In addition, the defense counsel argues that the color of the fabric must have been dyed a considerably dark brown, which would be unnatural, since the miso in Tank No. 1 had been prepared for one year and two

months, and the color of the miso in the Reproduced Miso Pickling Experimental Report, Nakanishi's experiment, and the 2021 experiment was considerably browned. However, the former employees of the company in question stated in agreement that the miso in Tank No. 1 at that time was light in color, based on the miso photo book attached with photographs of miso of various shades, and each of the above statements is consistent with the brewing expert's opinion that the miso in Tank No. 1 was not likely to turn brown in light of its brewing method. The above statements are consistent with the brewing expert's opinion that the miso in Tank No. 1 is not likely to brown in light of the brewing method. In this way, it is recognized that the color of the miso in the reproduced miso miso miso pickling experiment report, Nakanishi's experiment, and the 2021 experiment was a considerably darker shade than the miso in Tank No. 1, so it is not reasonable to compare the color of these miso with the color of the fabric of the five articles of clothing.

According to the above, even after considering the above argument of the defense counsel, the color tone of the fabric of the five items of clothing is different from the color tone of their bloodstains, and is not unnatural as if they had been soaked in miso for more than one year.

E. Examination

(a) Reasonable suspicion based on the color tones of the bloodstains and other marks on the five items of clothing

As described above, the bloodstains on the five items of clothing, as a whole, were brownish brown or blackish brown in color, but the white pants had bloodstains that were dark red or reddish purple, and the other clothing also had bloodstains that were reddish red. On the other hand, it is not recognized that the reddish color remains on the five garments soaked in miso for more than one year in Tank No. 1, but rather, the bloodstains lose their reddish color and turn dark brown when the five garments are soaked in miso for more than one year in Tank No. 1. The fact that the blood stains on the five garments showed reddish color indicates that the five garments were not put into Tank No. 1 before July 20, 1966, when the new miso ingredients were prepared, but were put into Tank No. 1 by a person other than the defendant in custody at a time close to the discovery of the blood stains. This indicates that the five items of clothing were not placed in Tank No. 1 prior to July 20, 1974, but were placed in Tank No. 1 by a person other than the defendant in custody at a time close to the discovery of the clothing.

And in light of the fact that the color tone of the blood stains on the five items of clothing raised reasonable doubt that they were not the clothes used in the crime, the fact that the five items of clothing were found in Tank No. 1 itself further strengthens the above-mentioned doubt. In other words, in light of sound social common sense, it is undeniable that the motive for arson in this crime involving robbery and murder includes the intent to destroy evidence of the robbery and murder, since Fujio's house was almost completely burned down, and the raincoat, part of the clothing, and the kuri kotoba, part of the murder weapon, were found in the courtyard of Fujio's house. In addition, the raincoat, part of the clothes used in the crime, and the kuri kouta, part of the murder weapon, were found in the courtyard of Fujio's house. Nevertheless, it is unnatural and irrational for the perpetrators to hide the clothes in the tank No. 1 of the Factory, which is only 31.8 meters away from the back doorway of Fujio's side, in the company where Fujio is the managing director, while taking the clothes from Fujio's side. The fact that he dared to hide the clothes in Tank No. 1 of the Factory, which is only 1.8 meters away, is in itself unnatural and unreasonable. The fact that the five items of clothing were found in Tank No. 1 further strengthens the above reasonable doubt that the five items of clothing were not the clothes used in the crime.

According to the above, if a person other than the accused concealed the five items of clothing in Tank No. 1 at a time close to their discovery, the five items of clothing are not the criminal's clothes worn by the perpetrator at the time of the crime in question.

(b) Possibility of fabrication of the five articles of clothing by the investigative agency

Since the five items of clothing are not the clothes worn by the perpetrator in this case, we can only assume that the five items of clothing were fabricated by someone else. Although the possibility of fabrication by the real culprit or his/her associates can be assumed, it is difficult to imagine a situation in which someone other than the investigative agency processed the clothes and hid them in Tank No. 1 at a time close to the discovery of the clothes. Therefore, it is difficult to imagine that anyone other than the investigative agency could have fabricated the five garments.

Therefore, we will examine whether there were realistic circumstances in which the investigative agency could have fabricated the five items of clothing.

In the first trial, the defendant confessed to the crime and was indicted, but after the first trial date, he turned to deny the confession, In addition, looking at the evidence before the discovery of the five items of clothing, there was only circumstantial evidence that had only limited probative value consistent with the defendant being the perpetrator of the crime. According to the evidence at that time, with the exception of the five items of clothing, the possibility of the defendant's acquittal was undeniable. However, the investigative authorities, who were convinced of the defendant's guilt and were engaged in the investigation of this case, found it unacceptable that the defendant should be acquitted. According to the evidence in this case, it was a realistic possibility that the investigative authorities would fabricate the five items of clothing in order to convict the defendant.

As described above, it is virtually impossible to assume that anyone other than the investigative agency could have fabricated the five items of clothing for the crime, and the investigative agency could have realistically assumed that the fabrication of the five items of clothing would have occurred. (c) The prosecutor's argument that the five items of clothing were fabricated evidence that was not related to the crime in question, but was processed by the investigative agency, such as by applying blood stains, and hidden in Tank No. 1 at a time close to the discovery of the fabricated evidence.

(c) Prosecutor's argument

The prosecutor argues that the fabrication of the five articles of clothing by the investigative agency was unrealistic and unfeasible.

First, the prosecutor argues that it is impossible or extremely difficult to dispose of the five garments similar to the five garments that the defendant actually wore, after preparing five garments that closely resemble the garments that the defendant wore before this incident, have a feeling of use, and have consistent sales channels.

However, based on the prosecutor's argument, it cannot be said that it was impossible or extremely difficult for the investigative agency under the circumstances described above to prepare the five items of clothing. In addition, it is recognized that the investigative agency was aware of the defendant's clothing since it conducted a search on July 4, 1966, of the employee dormitory at the Factory where the defendant was living at the time, and no one had been in charge of the defendant's clothing since his arrest on August 18 of the same year. Therefore, it is quite possible that the accused may have obtained the actual clothes of the accused and

fabricated them before his luggage was sent to his parents' house on or around September 27 of the same year. And if the investigative agency used the actual clothing of the defendant to commit the fabrication, the scraps found at the defendant's parents' house on September 12, 1967, were the actual co-woven fabric of the iron-blue pants, and it is impossible to explain that the scraps were found at the defendant's parents' house, as claimed by the prosecutor. It is not extremely difficult to explain the contents of Hakamada's statement and testimony regarding the scraps, and it is understandable that the police made efforts to clarify the sales route of the five articles of clothing as a matter of course. Moreover, if the investigative agency used the actual clothing of the accused to fabricate the story, there is very little risk that the discrepancies would be exposed after the fact and the fabrication would be discovered. Based on the above, it cannot be said that it was impossible or extremely difficult for the investigative agency to fabricate the five items of clothing.

Next, the prosecutor argues that in order to hide the five articles of clothing in Tank No. 1, it is necessary to obtain the cooperation of the company in question within a limited period of time after the start of the miso removal process. However, the company claims that it would be extremely difficult to obtain the cooperation of its employees.

However, the north entrance to the Factory was not locked during operation, and non-employees could enter and leave the Factory. At least at the time of the incident in question, the Factory was locked at night only by hanging a string on a nail driven into the gate and the door. Therefore, it was possible for the investigating agency to hide the five articles of clothing inside the No. 1 tank without being noticed by other employees. Therefore, it cannot be said that the cooperation of the employees of the company in question was indispensable for the concealment of the five items of clothing. Moreover, since the interests of the employees do not necessarily coincide with the economic interests of the company in question, it is difficult to say that it was extremely difficult to immediately obtain their cooperation because of the economic damage to the company in question. The possibility of concealing the five garments within a limited period of time with the cooperation of the employees cannot be denied.

Furthermore, the prosecutor argues that the fact that the five items of clothing were the clothes used to commit the crime contradicts the defendant's confession that he committed the crime while wearing pajamas, which is contrary to the prosecutor's proof policy at the time.

However, considering the relationship between the evidence at the time the five items of clothing were found and the circumstances of the interrogation of the defendant, it was undeniable that the defendant's confession was not voluntary, and there was a possibility that it would be excluded as evidence and the defendant would be acquitted. Therefore, it was a realistic possibility that the investigative authorities would fabricate the five items of clothing in order to convict the defendant, even if it was inconsistent with the defendant's confession and not in accordance with the prosecutor's initial proof policy. Furthermore, after the discovery of the five items of clothing on August 31, 1967, prosecutor Yoshimura, at the 16th trial date on September 5, 1967, claimed that the five items of clothing were the clothes worn by the defendant at the time of the crime, even though the next date was designated as November 17 of the same year. On September 11 of the same year, he also requested evidence including the five items of clothing, two employees who found the evidence, and one police officer as witnesses, and applied for on-site inspection of Tank No. 1, etc. At the 17th trial date on September 13, which was hastily set on September 12, he revised his opening statement to change the clothing from pajamas to the five items of clothing. Considering such flexible and prompt activities by prosecutor Yoshimura in cooperation with the police investigation, it is difficult to believe that the change in the initial proof policy, which was inconsistent with the defendant's confession, had such an impact on his activities to prove the case.

According to the above, even after considering the above arguments of the prosecutor, the above finding that the five items of clothing were fabricated evidence that had been processed by the investigating agency, such as by applying blood stains, and hidden in Tank No. 1 at a time close to their discovery, is not influenced by the above findings.

(4) Reasonable doubt based on DNA typing

A. The existence of reasonable doubt based on DNA typing, i.e., in light of the damage and bloodstains on the white short-sleeved shirt, there is a possibility that the bloodstains of the accused are on the upper right sleeve of the white short-sleeved shirt, and the DNA type found in the bloodstains on the right shoulder of the white short-sleeved shirt by DNA typing is not a match with the DNA type of the accused. In other words, does the result of the Honda test, which conducted DNA typing of the five items of clothing, support the aforementioned judgment that the five items of clothing were not the clothing used in the crime and were fabricated evidence by the investigative agency? The following is a discussion of the results of the Honda analysis.

B. Summary of Honda's expert opinion

Professor Honda conducted a 'DNA typing analysis' on the samples taken from the parts of the five items of clothing that were said to have blood stains on them, as well as on the samples taken from the victims' clothing, after employing a cell-selective extraction method that extracts blood cells separately from other cells. In the cell-selective extraction method, blood cells, including leukocytes, are agglutinated by placing the sample in saline solution to which ortho-anti-H lectin is added, and agglutinated blood cells with heavy specific gravity are precipitated by centrifugation to make an extract solution, thereby selecting only blood cells. Honda's expert opinion was based on the results of the STR type determination after extracting blood cell cells from each of the above samples (the samples in question) using the cell-selective extraction method and PCR amplification (amplified 28 times) using an identifier kit, and found that most of the detected alleles were blood-derived alleles, and that the DNA type of blood adhered to the right shoulder of a white short-sleeved shirt was the same as that of the defendant's. The DNA type of the blood on the right shoulder of the white short-sleeved shirt did not match the defendant's DNA type.

C. Summary of Yamada's expert testimony

In the second retrial hearing, in addition to the Honda expert test, a DNA typing test by Professor Yoshihiro Yamada was also conducted. In Yamada's expert opinion, DNA was extracted from a sample taken from a site in close proximity to the sample in question by placing the sample in a tube and treating it with proteolytic enzyme, and PCR amplification was conducted using three different kits (Identifiler, Minifiler, and Y-Filer) to determine the STR type (30 or 35 amplifications). As a result, alleles were detected at only some of the loci, and the overall reproducibility was lacking.

D. Difficulty in DNA typing of the samples in question

First, let us examine the samples from which the Honda and Yamada appraisals conducted DNA typing.

The five pieces of clothing from which the samples in this case were taken and the clothes of the victims had been stored at room temperature for a long period of time, more than 40 years after the incident, even at the time of the second retrial request hearing. In the case of such Chen's old samples, it is known that DNA degradation progresses and fragments due to bacteria, oxygen, etc., and it is also believed that DNA degradation

progresses considerably when the samples are stored at room temperature. Therefore, in light of the storage conditions, etc., the DNA fragmentation of the sample in question is considered to have progressed considerably.

In addition, DNA degradation progresses to a much greater degree in miso than when stored at room temperature due to the presence of proteins and DNA degrading enzymes produced by yeast, and degradation by degrading enzymes and bacteria progresses even after the sample is removed from the miso. Therefore, it is considered that the DNA fragmentation of the five garments from which the samples in question were taken has considerably progressed due to their having been soaked in miso for a certain period of time.

Furthermore, experts have stated that DNA is decomposed when treated at high temperatures, making it difficult to detect, and that no DNA remains when carbonized. The bodies of the victims were in a state of carbonization and discoloration over a wide area on the outer surface due to being burned by the oil mixture. In this way, the DNA fragmentation of the victims' clothes is also considered to have progressed to a certain degree due to the high temperatures caused by the fire.

Considering the storage conditions of the five items of clothing and the victims' clothing, as well as the effects of the high temperatures caused by the fire and the soaking in miso, even if blood-derived DNA remained on the five items of clothing or on the victims' clothing, it was extremely small in quantity and considerably degraded. Furthermore, since the five items of clothing and the victims' clothes were discovered more than 40 years before the second retrial hearing, they had many opportunities to be touched by many people, including police officers, prosecutors, witnesses, and court officials, but they had not been handled or stored with DNA typing in mind, and the possibility that the samples in question were contaminated by foreign substances is substantial. Therefore, it can be said that there is a considerable possibility that the samples in question are contaminated by foreign substances.

The above is consistent with the fact that DNA typing of five pieces of clothing and the victims' clothing conducted approximately 10 years prior to the Honda and Yamada appraisals revealed that although alleles were detected in some of the sitting positions, there was a possibility of contamination by foreign DNA, and the DNA type could not be determined.

As described above, it can be said that the DNA in the samples in question was extremely small in quantity and considerably degraded, even if blood-derived DNA remained attached to the samples, and that there is a considerable possibility of contamination by foreign DNA. In addition, DNA typing of degraded samples with such a small amount of DNA as described above may cause an allele dropout, in which a peak that should be detected is not detected, or an allele drop-in, in which an allele of unknown origin that should not be detected is detected, or may increase the risk of contamination, or may cause poor reproducibility. The instability of the test and the difficulty of type determination, such as the risk of contamination and poor reproducibility, have been pointed out.

According to the above, it can be said that the DNA typing of the sample in question was accompanied by considerable difficulties, in light of the extremely small amount of the sample and its considerably degraded characteristics.

E. Instability and Difficulty of DNA Type Testing of the Samples

Next, the instability and difficulty of the DNA typing of the sample is also evident in the results of the Honda and Yamada appraisals. In both cases, there were many loci where no alleles were detected at all, and very few alleles were reproducibly detected at the same loci, and the IOOORFU (fluorescent light intensity for measuring alleles, 150RFU) was not detected at all.

The fluorescence intensity of the allyl measurement, 150 RFU, is the standard fluorescence intensity standard.) The detection of alleles characteristic of samples with only extremely small amounts of DNA was observed, with no reproducibility at all even for clear peaks that exceeded 150 RFU. In addition, a mitochondrial DNA typing test was conducted in the Yamada test, but as a result, no mitochondrial DNA matching the victims was detected at all in the five pieces of clothing or in the victims' clothing. Compared to the STR type test, which targets nuclear DNA, of which only two copies exist in a single cell, the mitochondrial DNA type test targets mitochondrial DNA, of which more than 1,000 copies exist in a single cell, and is said to be dramatically more sensitive and suitable for analyzing minute amounts of deteriorated and obsolete samples. However, as stated above, the fact that the mitochondrial DNA typing test did not detect DNA types matching those of the victims in the five pieces of clothing and the victims' clothing strongly suggests that no detectable nuclear DNA derived from the victims' blood remains in the five pieces of clothing and the victims' clothing.

According to the detection of alleles in the Honda and Yamada appraisals and the results of mitochondrial DNA typing in the Yamada appraisal, it is clear that the DNA typing of the samples in question is unstable and difficult. Therefore, it is necessary to carefully examine the credibility of the Honda Appraisal, which appraised the sample in question, from the viewpoint of whether the difficulty of the DNA typing test was overcome or not.

F. Whether or not the Honda testimony overcomes the difficulty of DNA typing of the sample in question

Based on the above, we will examine whether the Honda Appraisal overcame the difficulty in DNA typing of the samples in question. As mentioned above, the cell-selective extraction method adopted by the Honda Appraisal aims to separate and extract blood-derived cells from other cells by, for example, agglutinating blood cells using ortho-anti-H lectin. However, the cell-selective extraction method is not devised to stably detect alleles overcoming the difficulty of DNA typing of minute and degraded samples, regardless of whether the method is effective in selectively extracting blood cells or not. Therefore, it cannot be said that the difficulty of DNA typing of the samples in question has been resolved or improved by the adoption of the cell-selective extraction method in the Honda Appraisal. In addition, the fact that the number of PCR amplification was set to 2 or 8 times in accordance with the kit manual and that Maxwell 1 6 with high removal performance of PCR inhibitors was used in Honda Appraisal does not eliminate or improve the above-mentioned difficulty in light of its effect or function, etc. According to the above, it cannot be said that the Honda Appraisal overcame the difficulty of DNA typing of this sample, which was a minute and degraded sample, after successfully separating and extracting blood-derived cells from other cells by adopting the cell-selective extraction method and other methods.

G. Circumstances that make it doubtful that the Honda Appraisal detected blood-derived alleles

In addition to the above, there are some circumstances that make us suspect the detection of blood-derived alleles in the Honda test. In the Honda test, nearly 200 alleles were detected, and in the Yamada test, 63 alleles were detected, but only two alleles matched completely and only two alleles matched partially. If most of the alleles detected in the Honda test were derived from blood, then a reasonable number of matching alleles should have been detected in the Yamada test, in which samples were taken from nearby sites. The fact that there are almost no matching alleles between the Honda and Yamada appraisals is a circumstance that

raises suspicion that the Honda appraisal detected blood-derived alleles, considering the fact that the Yamada appraisal set the number of PCR amplifications to 30 or 5 times. In addition, in the Honda test, alleles that clearly did not originate from the victims were detected, such as five types in one of the positions of the victims' clothing, and the DNA types of the green pants, Chieko's merry cloth shirt, etc. were almost identical to Professor Honda's DNA type, and Professor Honda himself admitted contamination by foreign DNA in three positions of his iron and navy blue trousers. In addition, Professor Honda himself admitted contamination by foreign DNA at three positions on the navy blue pants, and there are specific circumstances indicating the possibility of contamination by foreign DNA. Furthermore, as mentioned above, nearly 200 alleles were detected in the Honda test, of which 14 types of alleles (two of which are reserved for determination) were found. The results of the Honda test cannot be interpreted as the detection of actual DNA in a probabilistic and statistical manner. Furthermore, although no DNA type was detected in the Honda test from the five items of clothing and the sample taken from the part of the victims' clothing that was said to be free of bloodstains (control sample), multiple alleles were also detected in the control sample in the Yamada test, and in the Honda test, multiple ABO blood types were detected from multiple control samples. In the Honda test, the DNA test of the ABO blood type detected high peaks exceeding RFU1000 in several control samples, and other circumstances that suggest the possibility that the control samples are contaminated with foreign DNA are also recognized.

H. Summary

As described above, the difficulty of DNA typing of this sample, which is a minute and deteriorated sample, is obvious. Therefore, it is not possible to find that the allele detected in the Honda test is of blood origin. Therefore, as the Special Appeal Court for the Second Request for Retrial has determined to the same effect, the Honda testimony cannot be said to have evidentiary value for identifying an individual by DNA type.

I. Defense Counsel's Argument

In response, defense counsel argues that (a) the Honda test employs highly reliable standard testing methods, such as using Maxwell 1 6, which has high performance in removing PCR inhibitors, for the extraction and purification of DNA, and using a standard identity filer kit in the process of PCR amplification, and (b) the Honda test is, (b) Honda's expert opinion uses 28 PCR amplification cycles, which is considered to cause allele drop-out but not allele drop-in, and therefore, DNA types that

actually exist in the samples in question were detected; (c) The fact that DNA types were not detected from the control samples in Honda's expert opinion indicates that environmental contamination by foreign DNA is not a possibility. (c) The fact that the DNA type was not detected from the control sample in the Honda test shows that there is no possibility of environmental contamination by foreign DNA; (d) The Yamada test may have caused an allele drop-in because the number of PCR amplifications was increased while using template DNA in which PCR inhibitors remained, and it is rather natural that the conclusion differs from that of the Honda test; and (e) The frequency of appearance data claimed by the prosecutor is only 135%. The prosecutor claims that the results of the Honda test are reliable because the frequency data is based on a population of only 1350 persons, and it is quite possible for the results of the Honda test to appear in actual inspections.

However, with regard to (a) above, Maxwell 16 is only one of the commercially available DNA extraction and purification kits, and it does not have the effect, function, etc. to resolve the difficulty of DNA typing of trace amounts and degraded samples, nor has a reliable standard testing method such as an identity filer kit been used, The use of reliable standardized testing methods such as identity-filer kits does not resolve the aforementioned difficulties. Regarding (a) above, the allele drop-in is generally used to explain the case where most of the alleles are reproducible but a small portion of the allele peaks are not reproducible, and the probability effect (the number of amplified DNA fragments does not reflect the number of alleles present in the sample) when the number of PCR amplifications is limited to 28 times. Therefore, it cannot be said that limiting the number of PCR amplifications to 28 times has the effect of preventing the detection of foreign DNA in a case like this, where the sample was degraded and the number of alleles was not reproducible at most of the loci. The number of PCR amplifications was limited to 28 times, which was not effective in preventing the detection of foreign DNA. As for (c) above, it is true that no DNA type was detected in the control sample in the Honda test, but as mentioned above, there are circumstances that suggest the possibility that the control sample is contaminated with foreign DNA or that a blood-derived allele was detected, and therefore, the possibility of contamination by foreign DNA in the sample in question cannot be suspected. Therefore, it cannot be said that there is no possibility of contamination of the samples with foreign DNA.

As for (d) above, Yamada's method was devised to collect and detect DNA by extracting DNA using proteolytic enzymes, etc., using multiple columns and minifilers, and employing a greater number of PCR

amplification cycles than the standard, etc. It can be said that this method was capable of detecting actual DNA alleles. The method was capable of detecting real DNA alleles. With regard to the above mentioned Dan, it has been confirmed that the above data is statistically sound to use as an estimate of the frequency of occurrence of alleles in the Japanese population as a whole, and the hypothesis that the Honda testimony detected DNA that actually existed is difficult to adopt from a probabilistic and statistical perspective.

According to the above, even when considered in light of defense counsel's argument, the Honda test cannot be said to have evidentiary value for identifying individuals by their DNA types. Therefore, the results of the Honda test cannot be said to support the above judgment that the five items of clothing are not the crime clothes in this case, but are evidence that was fabricated by the investigative agency.

(6) Relevance of the scraps seized from the defendant's parents' house a. Possibility of fabrication of the scraps

Considering the fact that the prosecutor's report can be evaluated as substantially fabricated by the investigative agency, and that the five articles of clothing were fabricated by the investigative agency, in light of the principle of the interest of the accused when in doubt, the possibility of the scraps linking the five articles of clothing to the accused also goes far beyond the realm of an abstract possibility. The possibility that the scraps of clothing were fabricated by the investigative agency must be considered.

(a) The circumstances surrounding the seizure of the scraps and the prosecutor's activities to prove the case after the seizure, etc.

(Omitted)

(c) Examination

(a) Examination of the circumstances in which the investigative agency seized the scraps, etc.

The circumstances surrounding the seizure of the scraps by the investigative agency at the time of the search in question are found to be unreasonable and cannot be overlooked.

First, Lieutenant Iwata stated in his report on the discovery of evidence that “the piece of cloth was found to be the same fabric and the same color as the black pants found in Tank No. 1 on August 31, 1967” with

regard to the circumstances in which the scraps were seized in the search conducted on September 12, 1967, which had bands and gloves as its object. Additionally, on the 29th trial date of the confirmed first instance (May 9, 1968), Chief Matsumoto testified regarding the circumstances of the discovery of the fabric scrap: "There were two small drawers on the very top of the baby dresser, and when I opened the small drawer on the right side, I found various memos, sheets of paper, and a jumble of buttons inside, mixed in with it. I requested the voluntary submission from Hakata." He also stated that the reason for seizing the fabric scrap was, "Prior to that, a pair of pants with bloodstains had been found in the Factory's tank, and it seemed that they might belong to Hakata, so when I went to Hakata's house, I found similar fabric in the dresser, which is why I requested the voluntary submission."

However, the description in the evidence discovery report does not compare the fabric to a similar sample of navy blue pants, but rather states that it recognized the "black-like pants" as being of "the same fabric and color." According to the results of the on-site inspection conducted by Assistant Chief Haruta on August 31, 1967, the "black-like pants" (navy blue pants) found in Tank No. 1 were described as "black-like," but were also noted to be "damp and somewhat stiff from the moisture and salt of miso, and wrinkled." Furthermore, the actual navy blue pants were provided as evidence on September 1 of the same year, making it difficult for Chief Matsumoto and Assistant Chief Iwata to confirm the consistency between the fabric scrap and other clothing in the defendant's family home. They recognized that it was exceedingly difficult to acknowledge the fabric scrap found in a dry state as being of "the same fabric and color" as the damp and stiff navy blue pants.

Despite this, the investigation agency's assertion that the fabric scrap was of "the same fabric and color" as the actual "black-like pants" found in Tank No. 1 suggests that the fabric scrap, seized from the defendant's home, was part of the same fabric as the navy blue pants among the five pieces of clothing. This leads to the inference that the fabric scrap was brought into the defendant's home by someone from the investigation agency before the search was conducted.

Next, Assistant Chief Iwata stated in the evidence discovery report that the black-like fabric piece discovered (the scrap) was recognized as "the remaining fabric cut from the black-like pants found in Tank No. 1," meaning it was acknowledged as the same fabric. However, while it is possible for only one piece of the same fabric to be stored, it is typically found as a pair consisting of two pieces cut from the hems of both legs of the pants. It has been confirmed that the navy blue pants found in Tank

No. 1 on August 31 of the same year also had their hems processed as singles on both sides. Since only one piece was discovered at the defendant's family home, if that fabric piece is judged to be the same fabric as the navy blue pants, or "the remaining fabric cut from the pants," then it is reasonable to assume the existence of another piece of the same fabric, which should normally be present according to common experience.

Nevertheless, there is no evidence that Chief Matsumoto or Assistant Chief Iwata, who seized the fabric scrap, inquired about the whereabouts of the other "same fabric" from the witness Hakata, nor is there any indication that Prosecutor Yoshimura asked Hakata about it during his interrogation or witness examination. Thus, while the investigation agency broadly recognized the relevance to the case and seized a fabric scrap from the defendant's family home that could not be easily distinguished as the same fabric as the navy blue pants, they did not inquire about the whereabouts of the other piece of fabric that should have existed as a pair. Given the shape of the hems of the navy blue pants found in Tank No. 1, it is highly probable that the other piece exists somewhere. This inconsistency in the investigation is unreasonable and exceeds mere unnaturalness, as it contradicts the actions expected of the police conducting the search. This irrational investigative activity suggests that the purpose of the search was initially to seize a scrap from the defendant's family home, and that this scrap was originally part of the same fabric as one of the five pieces of clothing, inferring that it was brought into the defendant's home prior to the search by someone from the investigation agency.

(b) Examination of Prosecutor Yoshimura's Evidence Activities

There are unreasonable points in Prosecutor Yoshimura's evidence activities after the search in this case that cannot be overlooked.

First, from the day after the defendant's arrest, Prosecutor Yoshimura, together with police officers, began pursuing the defendant, assuming him to be the perpetrator of the crime. He prepared a prosecutor's report that was almost identical to the police report created on September 8, 1941. On September 11, 1942, regarding five pieces of clothing discovered from Tank No. 1, he requested evidence with the purpose of proving that these were the clothes worn by the defendant at the time of the crime. However, the pieces of fabric were seized from the defendant's family home the following day, on September 12, and Prosecutor Yoshimura did not interrogate Tomo Hakamada about the fabric until September 17. This indicates that Prosecutor Yoshimura had already determined that the five

pieces of clothing were the defendant's attire, despite the lack of concrete evidence linking the clothing to the defendant or hearing from Tomo Hakamada, who was present at the search.

Next, during the 16th trial session held on the 5th of that month, although the next session was scheduled for November 17 of the same year, on September 12, he suddenly corrected his opening statement at the 17th trial session on the 13th, changing the perpetrator's clothing from pajamas to the five pieces of clothing. However, since Prosecutor Yoshimura only interrogated Tomo Hakamada, the submitter regarding the fabric, on the 17th, it can be concluded that he had already judged the five pieces of clothing to be the defendant's attire without waiting for the next trial date, which was designated over two months earlier, and without even interrogating Tomo Hakamada about the fabric.

These facts can be seen as supporting the claim that the five pieces of clothing were fabricated by the investigative agency, and they also suggest circumstances indicating that Prosecutor Yoshimura was aware, prior to the search, that pieces of fabric would be seized from the defendant's family home.

(C) Examination of Tomo Hakamada's Testimony and Related Statements

In contrast, when examining Tomo Hakamada's statements during the investigation phase, the evidence discovery report prepared by Deputy Inspector Iwata notes that during the search, when a piece of cloth was shown to Tomo Hakama, he stated, "Isn't this something that Iwa used during the funeral of Kogane Miso?" Furthermore, in Tomo Hakama's prosecutor's statement dated September 17, 1967, he mentioned, "A dark-colored armband-like item, resembling a mourning band, was sent from the company and was found together with the items in either a Nanjing bag or a long cardboard box. Since it seemed new, I thought it might be a mourning band and stored it in the drawer of the baby dresser." He also stated, "This cloth was found and taken by a detective who came for a search before, and according to the detective, it seemed to have been cut from the hem of pants. If that's the case, it did look like that. This cloth was stored in the dresser, and I haven’t altered or cut it at all."

On the other hand, during the 24th session of the first trial held on February 15, 1968, Tomo Hakamada, while under oath as a witness, responded to the prosecutor's inquiry about whether there was a piece of cloth resembling a cut hem of dark pants among the three packages sent

from the company, saying, "I have never seen such a thing." He added, "The police officer showed it to me, claiming it was found in a drawer," confirming that it was the first time he saw it at that moment. In response to cross-examination by the defense attorney, he stated that while the police officer said it was a piece cut from pants, he didn't think that way and mentioned that it looked like a piece of armband. He testified that he had no recollection of the piece existing before the search.

In this way, Tomo Hakamada’s statements during the investigation phase contradict his testimony in court regarding whether pieces of cloth existed at the defendant's family home prior to the search. However, since the documents prepared by investigative authorities, such as statements or reports, cannot be evaluated in the same way as court testimony—where the content of the statement, the circumstances of the statement, and the demeanor of the witness are assessed together—it is necessary to consider not only the content of the statements but also the circumstances surrounding them in order to evaluate the reliability of the statements made during the investigative phase.

In other words, the testimony in court is obtained through questioning in an open court, under oath and with the penalties for perjury being communicated, in the presence of the defendant and their attorney. From the content of the testimony, one can assess to what extent it suggests the essential facts to be proven, as well as evaluate the credibility of the evidence based on the surrounding circumstances. In contrast, witness statements prepared by investigative authorities lack both the oath and the penalties for perjury, and due to the need for confidentiality in investigations, these statements are made in private settings without the presence of the defendant or their attorney. They are fundamentally produced only by the investigative authorities and the witness, making it difficult to judge the credibility of the evidence from the statements alone, as the content and circumstances are treated separately.

Particularly in the case of the narrative style commonly used in investigative practices today, where the interrogator summarizes the witness's statements and the questions and answers are not clearly separated, it becomes exceedingly challenging to evaluate the accuracy of the original statements based solely on such documents. There is a significant risk that the subjective interpretation by the interrogator may distort the original testimony.

Therefore, when examining the credibility of Tomo Hakama's prosecutor's statement, the following points can be considered: First, (1) the piece of cloth, which was said to have been seized from the defendant's family

home, measures 12 cm in length and 22 cm in width. Photographs taken at the time of the discovery show that the dark cloth piece occupies about one-third of the top of a small drawer, indicating that it is not of a size that could be easily overlooked. Second, (2) the two employees who packed the defendant's clothing and belongings into boxes and sent them to the defendant's family home on September 27, 1966, both testified that they did not clearly remember any "pieces of pants" or "circular pieces of cloth" that would suggest the presence of such pieces. It has been confirmed that no such pieces were found among the items sent to the defendant's family home.

These facts are inconsistent with the prosecutor's statement claiming that a "dark-colored armband-like item" was present at the defendant's family home prior to the search on September 12, 1967. However, they can be said to support Tomo Hakama's testimony that no pieces of cloth existed before the search.

Next, regarding the statement situation in the prosecutor's record of Tomo Hakamada, he responded to the defense attorney's inquiry that in the interrogation by Prosecutor Yoshimura, he spoke more in response to questions phrased as "Is it like this or that?" rather than voluntarily. This suggests a situation similar to leading or misleading questioning. Furthermore, at the end of the prosecutor's record of Tomo Hakamada, after the initial signature and seal of the witness, there is a note stating, "When the detectives came for a search earlier, they examined all the clothes and pants in the house, and there were absolutely no clothes of the same color fabric as the blackish cloth I mentioned earlier, so it is certain that it was not fabric that had been in the house before." It is recognized that the witness's signature and seal were added again. The format of such an addition provided the witness with an opportunity to request changes during the reading of the statement (refer to Article 179, Paragraph 2 of the Criminal Investigation Regulations, formerly Article 176, Paragraph 2). This suggests that rather than the witness voluntarily requesting corrections or adding memories, it was the interrogating prosecutor who added these remarks for emphasis. Therefore, in the investigative stage, the presence of a description in the prosecutor's record of Tomo Hakamada that suggests remnants existed prior to the search, along with the fact that he submitted a voluntary document stating "pants remnants" on the day the remnants were seized, indicates that he did not voluntarily provide his account based on personal experience. Instead, it strongly implies that he was confused after being told by police officers that unexpected items were discovered and referenced items (a box of sugar) that seemed to be funeral return gifts from the company related to this case, which were in the same drawer. This raises

significant doubts that he was methodically led to state that remnants were found among the defendant's belongings sent back from the dormitory through a process of elimination by the investigating authorities.

Furthermore, examining Tomo Hakamada's attitude during the trial, it is clear that while he is indeed the defendant's mother, there are inaccuracies in his memory. He responds to the prosecutor's main examination to the best of his recollection, but there is no particular indication that he is trying to protect the defendant. This does not particularly diminish the credibility of Tomo Hakamada's testimony.

In contrast, the prosecutor claims that Tomo Hakamada testified that he has no recollection of making statements that differ from his memory or of a statement being created that differs from his explanation, and asserts that his signature and seal on the prosecutor's record enhance the credibility of his statements. However, the credibility of testimonial evidence is judged based on a comprehensive evaluation of corroborating evidence and the circumstances of the testimony. The prosecutor's reference to Tomo Hakamada's testimony and his signature and seal on the record only suggests the authenticity of the document, meaning that the content of the testimony matches what is recorded. It does not directly affirm the truthfulness of the content, that is, the veracity of the testimony.

The prosecutor's argument may contradict the ideal of interrogation, where the investigative authorities are expected to ensure the voluntariness of statements while striving to gather and assess sufficient evidence through corroborative investigation (refer to Article 168 and 173 of the Criminal Investigation Regulations, formerly Articles 165 and 170, and Sections 4 and 5 of the prosecutorial principles). Therefore, this claim cannot be accepted.

Based on the above, while the testimony of Hakamada, stating that he was unaware of the existence of the fabric scraps prior to the search, can be considered credible, it must be said that the credibility of his testimony in the prosecutor's written statement suggesting that the scraps existed before the search is lacking.

D. Relevance of the Fabric Scraps

The circumstances under which the fabric scraps were seized and the prosecutorial activities following the search suggest that the scraps, which were seized from the defendant's family home, must have been brought there by individuals from the investigative agency before the search, otherwise it would be extremely difficult to explain the situation. Furthermore, considering that the defendant's confession can be

evaluated as having been essentially fabricated through "coercion, torture, or threats" by the investigative agency, and that the five pieces of clothing have been recognized as fabricated evidence, along with the challenging circumstances of the prosecutor's efforts to secure a conviction in the final ruling at the first trial, it is reasonable to conclude that the fabric scraps connecting the five pieces of clothing to the defendant were also fabricated by the investigative agency. Therefore, since the fabric scraps are evidence that lacks relevance to this case, they will be excluded ex officio in accordance with Article 207 of the Code of Criminal Procedure.

(7) Evaluation of the Currency in Question
In this case, there is little evidentiary value suggesting that the defendant is the perpetrator, and the prosecutor has not argued any basis for the defendant's identity as the criminal. However, the issue of the fabrication of the currency will also be considered.

According to the relevant evidence, on September 13, 1966, after the indictment, a "double envelope" (the envelope in question) was discovered at the Shimizu Post Office. On the right side of the front of the envelope, it was written in pencil in katakana as " Shimizu Police Station" in vertical script, but it had no postage stamp and the sender's name was not written. Inside this envelope, there was a "letter (notepaper)" (the notepaper in question) that contained a message written in katakana with a pencil-like instrument stating, "It seems that there was something in my bag at the miso Factory without my knowledge." Additionally, there were two one-thousand-yen bills with "Iwao" written in katakana with a pencil-like instrument and one one-hundred-yen bill with an unknown person's blood type that was partially burned, totaling 18 pieces of currency (the currency in question) amounting to 50,700 yen, all of which were approximately half burned.

Looking at the currency in question, the envelope appears to be addressed to the chief of the Shimizu Police Station, which is investigating the crime. The currency includes two one-thousand-yen bills marked with the defendant's name "Iwao" and one one-hundred-yen bill with the blood of an unidentified person. The notepaper indicates that the currency is related to the crime, suggesting to the police that the defendant is involved in the crime and that the currency is part of the stolen property.

In the final first-instance judgment, considering the testimony of Assistant Inspector Sumiyoshi, who interrogated Matsushita, it was determined that Matsushita, the defendant's partner, was aware that the currency had been obtained through the defendant's involvement in the crime. Matsushita is said to have received the currency from the defendant in

some manner and sent it enclosed in the envelope. Furthermore, the judgment states that the defendant brought 50,000 yen of the stolen cash to Matsushita's home around July 11 or 12, 1966, and left it there. After about half a month to 20 days, when the defendant went to retrieve it, Matsushita was not present, so the money remained there. The credibility of this account in the prosecutor's statement is affirmed, linking the currency to the stolen property in the crime. This recognition is also supported in the confirmed appellate judgment.

However, it cannot be established that Matsushita sent the envelope in question or that the banknotes in question were part of the items stolen in the incident. Specifically, looking at the condition of the banknotes, all 18 banknotes have the serial number portions on the upper left and lower right sides burned away. Since different serial numbers are printed on each banknote of the same type, such burning suggests that someone intentionally destroyed the banknotes' identifying information and provenance. Furthermore, it is reasonable to assume that the perpetrator who deposited the banknotes or the person who received them would either use the banknotes as cash or burn them all to destroy evidence, making it unlikely that they would only burn the serial number portions of the banknotes. Thus, it follows that the burning of part of these banknotes was likely done by someone who intended to send the banknotes to the police. However, Matsushita not only testified that he was unaware of the envelope's dispatch, but even the handwriting analysis results from both the confirmed first instance and the confirmed appellate instance do not allow for the identification of Matsushita as the sender of the envelope, and there is no other evidence sufficient to establish that Matsushita sent the envelope.

Therefore, upon further examination, in this case, the investigative authorities, under circumstances that significantly infringe on the right to remain silent and have a very high risk of inducing false confessions, employed inhumane interrogations that inflicted physical and mental pain to coerce statements. First, on September 6, 1966, Police Chief Matsumoto and others obtained a confession from the defendant. Subsequently, on September 9 of the same month, Prosecutor Yoshimura, in coordination with police interrogations, obtained a confession from the defendant that included content linking the banknotes and the defendant, as already established. The defendant confessed that he had entrusted the 50,000 yen he extorted to Matsushita on September 6 to the police and on September 9 to the prosecutor. The banknotes in question were collected between September 11 and 12 following that confession. Furthermore, the police report dated September 24, which was excluded from evidence in the confirmed first instance, contains a

statement identical to the prosecutor's report claiming that the defendant entrusted 50,000 yen to Matsushita around July 10. This raises suspicion that the individual who attempted to send the banknotes to the police was a member of the investigative authorities trying to align with the contents of those statements.

Additionally, while the details on the notepaper among the banknotes suggest the defendant's involvement in the crime, the contradictory feature that all identifying serial numbers on the banknotes have been burned away aligns with the suspicion that the person who sent the banknotes believed the defendant to be the perpetrator but should not have fabricated evidence, as they were part of the investigative authorities. Considering the nature of the interrogations of the defendant, the circumstances surrounding the discovery of the banknotes, and the lack of objective grounds for establishing that Matsushita sent the banknotes, it is strongly suspected that the banknotes were also fabricated by members of the investigative authorities.

However, there is no direct evidence that the sending of the banknotes was carried out by members of the investigative authorities. Furthermore, if it is argued that the sending was not by the investigative authorities, it cannot be said that explaining the situation is extremely difficult. Therefore, it cannot be acknowledged that the banknotes were fabricated by members of the investigative authorities.

Based on the above, while it cannot be recognized that the banknotes were fabricated by the investigative authorities, they can be evaluated as evidence that supports the necessity of examining the realistic possibility of evidence fabrication in this case.

(8) Summary
As outlined above, the five pieces of clothing that have been considered the most central evidence suggesting the defendant's guilt are recognized to be unrelated to the crime in question and were hidden in Tank No. 1 by someone other than the defendant around the time they were discovered. Given that the only practically conceivable individuals who could have fabricated these garments as crime attire are those from the investigative authorities, and considering the circumstances under which the investigative authorities could realistically engage in the fabrication of these garments, it is acknowledged that the five pieces of clothing were processed, such as being stained with blood, by the investigative authorities and were hidden in Tank No. 1 shortly after their discovery as fabricated evidence. Furthermore, the scrap that links the five pieces of clothing to the defendant is also deemed to have been fabricated by the

investigative authorities. Therefore, both the five pieces of clothing and the scrap are evidence that has no relevance to this case and can be excluded ex officio, meaning they do not support the assertion that the defendant is the perpetrator of the crime.

Summary of Judgment (Part Four)

3. Examination of the Prosecutor's Claims Regarding the Perpetrator Profile (Claim ①)

(1) Claims Arguments of the Prosecutor and the Defence

The prosecutor strongly argues that the perpetrator of the incident is likely to be associated with the Factory in question, asserting that the defendant could have acted in accordance with the behavior inferred from the evidence at the time of the crime (Claim ①). As grounds for this assertion, the prosecutor points out that the perpetrator wore a raincoat found at the Factory on the night of the incident and that mixed oil present at the Factory was used in the arson. Additionally, the prosecutor claims that there are facts suggesting the perpetrator had entered and exited the Factory on the night of the crime.

In response, the defense counsel contends that the facts cited by the prosecutor as the basis for Claim ① are not acknowledged and argues that since the crime was committed by multiple individuals aiming to settle a grudge, it is clear that the defendant, who had no motive, is not the perpetrator of this crime.

(2) Preliminary Facts
(Omitted)

(3) Consideration
A. The prosecutor's claim that the perpetrator wore a raincoat found at the Factory on the night of the incident and went to the crime scene.
(A) Established Facts
(Omitted)
(B) Judgment
As per the aforementioned facts, the knife in question was found near the body of the victim and is recognized as a suitable weapon that caused the injuries to the victims. Additionally, no similar knife had been seen at the home of Fujio prior to this incident. Therefore, the knife in question is acknowledged as the weapon that inflicted the injuries on the victims. Furthermore, a raincoat that had been left at the Factory by an employee of the company a few days before the incident was discovered at Fujio's residence. The sheath of the knife, which completely matches the weapon, was found in the right pocket of the raincoat, and human blood was found on the raincoat, strongly suggesting that the perpetrator wore the raincoat while entering Fujio's residence.

(C) Defense Attorney's Argument
In response, the defense attorney argues that it is unnatural for the perpetrator to commit the crime while wearing a heavy raincoat that makes noise, especially since it was not raining. Furthermore, referring to the investigation report dated 30 June 1966, created by Assistant Inspector Haruta, which mentions the discovery of the raincoat and sheath, the time of discovery has been corrected from around 11.15 a.m. to around 4.00 a.m. and there are no accompanying photographs, which raises suspicions. The defense claims that the raincoat and sheath were fabricated by the police to implicate individuals associated with the Factory.

However, there are various plausible reasons for wearing a raincoat, such as avoiding visibility at night, which means it cannot be concluded that it is unnatural for the perpetrator to wear one. Additionally, the on-site inspection of the raincoat and sheath was conducted in the presence of Shojiro Mizuno, the sales manager of the company, and the on-site inspection report created by Assistant Inspector Haruta on 6 July 1966, includes descriptions from the witness regarding the raincoat, along with photographs taken of the raincoat and sheath alongside a sign indicating the date of the inspection and the witnesses present. There is no evidence suggesting that the inspection took place on a different day than June 30. Furthermore, even in the investigation report dated 30 June 1966, prepared by Assistant Inspector Haruta, the correction of the time of discovery appears to be a clerical error where the time the inspection began (around 11.15 a.m.) was mistakenly recorded as the time of discovery, and the absence of photographs in the report created on the day of discovery does not seem unnatural. Additionally, it is difficult to find reasons to suggest that the investigative agency would engage in fabricating evidence against individuals associated with the Factory from the initial stages of the investigation. Observing the proceedings during the early stages of the investigation after the day of the incident, there is no indication of evidence fabrication by the police.

Based on the above, even considering the defense attorney's arguments, there is no suspicion that the investigative agency fabricated the raincoat and sheath. This conclusion is not influenced by the recognition that the investigative agency fabricated Five Items of Clothing and Scraps.

Additionally, the defense attorney argues that the Ueno Evaluation is unreliable because it is based on a new knife without a broken tip, submitted for reference. Indeed, the Ueno Evaluation draws its conclusion based on a knife approximately 13.6 cm long with a blade width of about 2.1 cm at the handle, which does not have a broken tip. However, the

shape of the knife does not affect the process by which Ueno Evaluation estimated the weapon from the victims' injuries. Although the Knife in question has a slightly broken tip, it is still sufficiently sharp and does not differ significantly in shape, making Ueno Evaluation's conclusion applicable and reasonable for the Knife.

Furthermore, the defense attorney argues, based on two responses from Professor Shigeoyoshi Oshida and the examination report from Dr. Masayoshi Yokoyama, that there are injuries on the victims that could not have been inflicted by the knife in question. Upon examination, first, Professor Oshida's aforementioned responses discuss the wound that severed the left side of Fujiko's ninth thoracic vertebra. CT images were taken of ten female models (four of which had body shapes similar to Fujiko's), and when measuring the distance from the skin surface to the thoracic vertebra, the average for all ten cases was 17 cm, while for the four models with body shapes similar to Fujiko's, the average was 16.5 cm. Considering that the skin and subcutaneous soft tissue would be indented to about half that thickness, this indicates that for both averages, it would be approximately 14.7 cm. Thus, even if the tip had not been broken, the knife in question, which is about 13 cm long, could not have inflicted the wound on Fujiko. However, given that there is individual variation in body shape, even using models with body shapes similar to Fujiko's, it is unreasonable to estimate the depth of Fujiko's wound based on the body of another person. In fact, even among models with similar height, weight, and chest circumference, it was recognized that there was a difference of about 2 cm in the distance from the skin surface to the thoracic vertebra. Moreover, despite the apparent individual differences in the elasticity of soft tissues, the basis for Oshida Opinion that the indentation would reach half the thickness of the skin and soft tissue is unclear. The Oshida Opinion does not consider that the thoracic cage also possesses elasticity, separate from soft tissue. Therefore, even if we take the aforementioned figure suggesting that a weapon longer than approximately 14.7 cm is required to inflict Fujiko's wound as a reference, the difference in length compared to the Knife in question is only about 2.6 cm. Consequently, taking into account individual variations in body shape, the elasticity of soft tissues, and the thoracic cage, it is acknowledged that a knife with a blade length of approximately 12.1 cm could inflict Fujiko's wound. Therefore, the Oshida Opinion that the Knife in question could not inflict Fujiko's wound cannot be accepted.

Next, regarding the above assessment by Dr. Masayoshi Yokoyama, it can be considered that:

a. Considering Fujio's height and the thickness of his clothing, the transverse diameter of his chest is estimated to be 35 cm, and a knife with a minimum length of 17.5 cm would be necessary to penetrate the middle lobe of the chest.

b. The wound on Fujiko's left anterior chest was stabbed diagonally from above downward. Given that Fujiko is not particularly short at 159 cm, a weapon length of at least 20 cm is required.

c. The stab wound in Masaichiro's liver penetrated the 6th rib cartilage diagonally and reached the liver via the diaphragm. If we consider the length of the stab wound in the rib cartilage to be 1 cm, the depth of the liver wound to be 4 cm, and the thickness of the diaphragm to be 0.7 cm (totaling 5.7 cm), then if we assume the blade width of the involved knife is 1.2 cm, the tip would need to be 5.7 cm, making the distance from the body of the sternum to the diaphragm zero. This suggests that a weapon longer and thinner than the Knife could be considered.

However, the basis for Yokoyama Evaluation regarding point a, particularly the transverse diameter of Fujio's chest being 35 cm and the estimation of the weapon's length based on that, is entirely unclear. Similarly, for point b regarding Fujiko's wound, the reasoning behind estimating the weapon and the length of the stab based on the angle of entry and her height is also completely unspecified. Furthermore, for point c regarding Masakazu's wound, the basis for estimating the knife's blade width as 5.7 cm and the initial parameters such as the length of the stab wound in the rib cartilage and the thickness of the diaphragm remains completely unknown.

In summary, the Yokoyama Evaluation lacks objective grounds overall and can only be regarded as having extremely low credibility.

Based on the above, even when considering the defense's various claims regarding the raincoat, sheath, and the weapon involved in this case, the determination that the perpetrator of this incident likely entered Fujio's residence wearing the raincoat placed in the Factory remains unchanged.

B. The prosecutor's claim that the mixed oil from the Factory was used in the arson

In addition to the aforementioned premise, regarding the prosecutor's assertion that the mixed oil from the Factory was used in the arson, the following facts can be recognized based on the evidence presented below.

(A) Established Facts
(omitted)

(B) Judgment
According to the aforementioned premise and established facts, the Factory and Fujio's residence are located near each other, separated by a railway. It is noted that, a few days prior to the incident, the mixed oil in the can at the Factory had decreased by 5.65 liters after the event. Despite extensive inquiries and investigations by employees and police officers, they were unable to identify any employees who had used the mixed oil during that time. It has also been recognized that a mixed oil similar to that in the Factory was used in the arson, and that human blood was found on the Can in this case. Based on these circumstances, it can be said that there is a high possibility that the mixed oil from the Factory was used in the act of arson.

(C) Defence’s Argument
In response, the defense argues that while Nakazawa Evaluation acknowledges the presence of lubricating oil, it denies the entirety of Shinoda Evaluation, claiming that it cannot be said that the mixed oil was used in the arson based on Shinoda Evaluation. However, Nakazawa's assessment recognizes that Shinoda's acknowledgment of the presence of gasoline is valid and, based on the color and viscosity of the extracted samples, it is indeed possible to regard the extraction as high-boiling mineral oil. Therefore, it is clear that Nakazawa's assessment supports Shinoda's findings to the extent that mixed oil was found on the victims' clothing and other items. Even when considering the remaining arguments put forth by the defense, the determination that a mixed oil similar to that from the Factory was used in the arson remains unchanged.

C. The prosecutor's claim that there are facts suggesting the perpetrator entered and exited the Factory on the night of the incident
In addition to the aforementioned premise, regarding the prosecutor's assertion that there are facts indicating the perpetrator entered and exited the Factory on the night of the incident, the following facts can be recognized based on the evidence presented below.

(A) Established Facts
(omitted)

(B) Judgment
Based on the facts in sections A and B, it can be inferred that the perpetrator of the incident wore the raincoat located at the Factory when

they went to the crime scene, and it can be said that there is a high possibility that the mixed oil from the Factory was used in the act of arson. Additionally, as established, after the incident, two fabric bags belonging to the victims were found near the back entrance of Fujio's residence, a bloodstained handkerchief was discovered at the Factory, and human blood was found in the Factory's bathroom. These facts can be evaluated as consistent with the aforementioned inferences.

(C) Defense's Argument
In response, the defense argues that since the back wooden door of Fujio's residence was locked, the fact that a bag of money was found between the Factory and Fujio's residence does not connect the crime to the Factory.

Upon examination, according to the evidence, including the verification report prepared by Assistant Inspector Kuroyanagi dated July 10, 1966, the structure of the back wooden door and the situation after the crime are as follows: The back wooden door of Fujio's residence consists of two doors that open outward like double doors, secured with a latch at the top and bottom, as well as a central bolt. Before going to bed, Fujio or Chieko locked not only the central bolt but also the top and bottom latches, ensuring that there were no gaps when the two doors were closed. After the incident, the central bolt was found passed through the U-shaped bracket of the right door (west side) in a charred state, while it was not present on the left door (east side). The top latch was found several meters inside the residence, where the male and female fittings were engaged together, and the bottom latch had been disengaged from its fittings, remaining attached to the wooden frames of the respective doors. Additionally, during firefighting efforts, there were gaps in the back wooden door, allowing the fire inside Fujio's residence to be visible from the outside. The door was difficult to open by pushing, and when pressed or kicked from the outside, it would gradually open. The corridor and storage area where the back wooden door was located had most of its roof burned away due to the fire, and debris from burned furniture was covered with tiles and dirt, creating a chaotic situation.

According to the above, the back gate of Fujio's house is structured to be opened from the inside, making it easy for the perpetrator of this case, who entered Fujio's residence, to come and go through the back gate to the Factory in question. In fact, after the incident, the lower latch was found unlocked on both left and right doors, suggesting that the perpetrator had disengaged the lock. Furthermore, during firefighting efforts, there was a gap in the back gate, which should not have existed if it were closed, and the door gradually opened when force was applied

from the outside. Additionally, although it is possible that the left (east) door had burned, there was no latch remaining, and debris such as tiles had accumulated inside the back gate. Considering these factors, it can be inferred that the latch on the back gate was not locked during the firefighting efforts, and the reason the door did not open easily was due to the accumulation of materials that fell from the roof and other structures because of the fire. Moreover, taking into account the possibility that the upper latch may have fallen off when the perpetrator unlocked the lower latch and exited Fujio's residence, even when considering the defense's arguments, it can be acknowledged that the back gate of Fujio's house was accessible to the perpetrator until debris accumulated due to the fire. Therefore, the defense's claim that the perpetrator could not pass through the back gate cannot be accepted.

D. Examination of Inferences Based on the Profile of the Perpetrator

(A) Degree of Inference Based on the Profile of the Perpetrator
Based on the aforementioned facts, it can be inferred that the perpetrator of this case entered Fujio's residence wearing the raincoat that was kept at the Factory, and it is highly likely that the mixed oil from the Factory was used in the arson. Additionally, the fact that two cloth bags containing stolen items were found near the back door of Fujio's house and that a blood-stained handkerchief was discovered from the Factory aligns with the above inferences. According to the relevant evidence, the defendant was alone in the employee dormitory on the night of the incident, indicating that he had the opportunity to commit the crime.

However, even when considering all the facts, it cannot be inferred that the perpetrator took the raincoat from the Factory on the night of the incident. Given the storage conditions of the raincoat, it cannot be ruled out that someone other than an employee wore it to commit the crime. While it is indeed likely that the mixed oil from the Factory was used in the arson, it cannot be conclusively determined that the mixed oil from the can was unrelated to the crime, considering the storage conditions of the can and how it was used by employees. Furthermore, the location where the cloth bags containing stolen items were found is merely near the back door of Fujio's house, which could easily explain them being left behind when the perpetrator escaped to a location other than the Factory. Additionally, the blood on items such as the handkerchief found at the Factory could have been deposited during other incidents unrelated to the crime.

In addition to the above, the company in question employs several dozen employees, and there was an office for the company on the second floor

of the Factory. This suggests that numerous individuals other than employees frequently entered and exited the Factory. The main entrance on the north side of the Factory was open during the day and locked at night; however, the small door installed on the gate was secured only by a string tied to nails on the gate and the small door. Moreover, the small door was not locked the day before the incident, allowing non-employees to enter at night.

Thus, it is plausible that not only employees residing outside the Factory but also individuals familiar with the circumstances inside the Factory could have entered on the night of the incident and committed the crime. Additionally, it cannot be ruled out that someone other than an employee obtained the raincoat and entered the Factory that night to commit the crime.

Based on this analysis, while the aforementioned facts suggest a connection between the Factory and the crime, they do not allow for a definitive conclusion that the perpetrator was an employee of the Factory or that the perpetrator entered the Factory on the night of the incident. The facts leave open the possibility that individuals other than employees living in the dormitory within the Factory, specifically someone other than the defendant, could have committed the crime. Therefore, the facts only have limited probative value, consistent with the possibility that the defendant is the perpetrator.

(B) Prosecution's Argument
In response, the prosecution argues that based on the facts recognized by this court, it is strongly inferred that the perpetrator of this incident is associated with the Factory, and that the defendant could have acted in accordance with the behavior inferred from the evidence at the time of the incident (Claim ①). Furthermore, considering other circumstances consistent with the defendant being the perpetrator (facts from Claim ③), the prosecution claims that there is a reasonable degree of inference that the defendant is the perpetrator. However, if the prosecution's argument intends to assert that it can determine the perpetrator was an employee of the Factory without reasonable doubt, such a determination cannot be made, as previously stated. On the other hand, if the prosecution's argument merely suggests that it is highly likely that someone associated with the Factory is the perpetrator, then the possibility of a crime being committed by individuals other than employees remains significant. Therefore, the evidence supporting the inference that the defendant is the perpetrator is quite limited. Consequently, even considering the prosecution's argument, the facts indicating a connection between the

Factory and the crime only possess limited probative value, sufficient to support the possibility that the defendant is the perpetrator.

(C) The Defense's Argument that the Crime was Committed to Avenge a Grudge by Multiple Offenders

The defense argues that, considering the condition of the victims' bodies and other factors, the crime was not feasible for a single perpetrator. Given the brutal method of killing, it suggests that the crime was committed to avenge a strong grudge against the victims, and that the perpetrator was an external individual unrelated to the Factory.

Indeed, if there is reasonable doubt regarding the crime being committed by a single perpetrator, then reasonable doubt also arises regarding the defendant's identity as the perpetrator. Additionally, if there remains reasonable doubt that the crime was a robbery-murder as stated in the indictment, and instead was committed to avenge a grudge against the victims, this could cast doubt on the defendant's culpability, as there would be no evidence of any grudge against the victims.

Upon examination, as established by the aforementioned facts, after the crime, three bags containing the company's sales money were reported missing, and a wallet, typically kept in the office of the defendant, was found near the back entrance. This strongly suggests that the perpetrator had the intent to acquire money or valuables, which contradicts the assumption that the crime was motivated by avenging a grudge against the victims. Furthermore, as indicated by the established facts, the numerous wounds on the victims were nearly identical in shape and size, demonstrating that the wounds could only be inflicted using the specific knife involved in the crime. This suggests that the crime was executed solely with this knife and could have been carried out by a single individual.

In response, the defense first argues that the victims' bodies show signs of being restrained with belts or chain-like objects, claiming that the victims were killed while immobilized. However, the autopsy reports from the two examining physicians, as well as the evaluations from Ueno and Naito that reviewed the autopsy records, and the opinions from Oshida and Yokoyama, commissioned by the defense, do not indicate any signs of restraint on the victims’ bodies. Therefore, the defense's claim is not based on expert knowledge or judgment. Additionally, the victims' bodies were extensively charred and discolored due to being burned with mixed oil, making facial recognition impossible, and some areas exposed bone and muscle. A detailed examination of the photographs of the victims'

bodies does not reveal any traces that could definitively be identified as signs of restraint by belts or similar objects. Furthermore, there are defensive wounds on the left hand and arm of one victim, which is inconsistent with the assumption that they were killed while restrained and unable to move. Based on the above, even when considering the defense's arguments, the photographs of the victims' bodies do not raise any doubts about the presence of restraint marks. The defense also claims that the police, knowing the identity of the true perpetrator, intentionally concealed the fact that the victims were restrained. However, this is inconsistent with the lack of mention of restraint marks in the autopsy reports from the two examining physicians and remains in the realm of speculation.

Next, the defense argues that the missing teeth of Fujio, the fractured right arm, and the skull damage to Fujiko, resembling a hole, were caused by the perpetrator inflicting pain on the victims. However, Fujio's body was found buried face up in a corridor and storeroom, covered by debris such as tiles and clay, with only his right hand exposed. Thus, the missing teeth and fractured arm could also be attributed to the fire or falling debris.

While a depression is observed in Fujiko's left forehead, her body was found face down with burnt tiles, soil, and debris on top. Dr. Toshinobu Suzuki, who performed the autopsy on Fujiko, testified in the first instance that the depression in the head was likely caused by the fire. Given the circumstances of the bodies' discoveries, it is reasonable to conclude that Fujio's missing teeth and fractured arm, as well as the depression in Fujiko's head, were caused by the fire or falling debris. Moreover, even if these injuries were indeed inflicted during the commission of the crime, this alone does not raise reasonable doubt about the perpetrator having a motive of avenging a grudge.

Furthermore, the defense argues that the fact that many valuables and cash were not taken from Fujio's home indicates that the perpetrator did not have the intent to steal. However, while the presence of many valuables remaining in Fujio's home suggests that the perpetrator may have acted impulsively in committing this robbery-murder, it is not unreasonable to consider that the perpetrator, having entered with the intent to steal, became unsettled during the commission of the crime and lacked the psychological or temporal capacity to search for more valuables. Therefore, the fact that valuables remained in Fujio's home does not undermine the inference that the perpetrator had the intention to acquire goods.

Additionally, the defense argues that the extremely high number of wounds on the victims, many of which were shallow, indicates that the crime was not a robbery and that multiple perpetrators were involved. However, considering the shape of the knife used in this case, it is extremely easy to repeatedly stab and withdraw. Given this characteristic of the weapon, it is not unreasonable to conclude that the numerous wounds could have been inflicted by someone who did not harbor a grudge against the victims. Furthermore, based on the structure of Fujio's house and the positions of the victims' bodies, it seems plausible that the perpetrator could have sequentially attacked the victims using this knife.

Therefore, the number and shape of the wounds do not immediately raise doubts about the perpetrator being a multiple offender acting out of revenge. Based on the above, even when considering the defense's argument, there is no reasonable doubt that the crime was committed to avenge a grudge against the victims, and it is recognized that the crime could have been carried out by a single individual. Thus, the defense's argument cannot be accepted.

(4) Summary

As stated above, while there are facts suggesting a connection between the Factory in question and the crime, it cannot be established that the perpetrator was an employee of the Factory or that the perpetrator entered or exited the Factory on the night of the incident. This leaves open the possibility that someone other than the defendant, specifically individuals other than employees residing in the dormitory within the Factory, may have committed the crime. Therefore, the facts regarding the profile of the perpetrator have only limited evidentiary value, sufficient to be consistent if the defendant were the perpetrator. On the other hand, there is no reasonable doubt that the crime was committed to exact revenge on the victims, and it is recognized that the crime could be executed independently.

Summary of Judgment (Part Five)

4. Examination of the Prosecutor's Argument Regarding the Consistency Between the Defendant and the Perpetrator (Claim ③)

(1) Claims by the Prosecutor and Defense Attorney

The prosecutor argues that the defendant sustained multiple wounds, including a laceration on the left middle finger, on the night of the incident; that blood from another person and mixed oil were detected on the

pajamas worn by the defendant; and that the defendant had purchased and possessed a pruning knife prior to the incident. They assert that these circumstances indicate that the defendant had a motive to commit the crime, and that there are several factors consistent with the defendant being the perpetrator, which reasonably leads to the inference that the defendant is indeed the perpetrator. In contrast, the defense attorney contends that the aforementioned facts are either not acknowledged or, even if acknowledged, hold no evidential value that would support an inference of the defendant's guilt.

(2) Laceration on the Defendant's Left Middle Finger

According to relevant evidence, the defendant sustained an injury to the left middle finger after the firefighting activities on the day of the incident, and it is acknowledged that he repeatedly wiped away blood with cotton and wrapped the finger in a bandage. Additionally, a doctor who observed the injury after the incident testified that the laceration on the defendant's left middle finger was likely caused by some sharp object, such as a knife, and there are no circumstances that cast doubt on the credibility of this testimony. Therefore, it is recognized that the defendant had a wound on his left middle finger, formed by a sharp object, on the night of the incident. However, the defendant claims that he was engaged in firefighting activities at the Fujio location after the incident and states that he sustained the injury to his left middle finger during those activities. There is no evidence to refute this claim, so it is entirely possible that the injury was sustained at a different time than the commission of the crime. Furthermore, this is supported by the fact that there were indeed employees who were injured during the firefighting efforts. Based on this, while it is consistent with the possibility that the defendant is the perpetrator if he had a wound on his left middle finger caused by a sharp object on the night of the incident, it is argued that the number of wounds is excessive for an injury sustained during firefighting activities. However, upon scrutinizing the relevant evidence, it cannot be acknowledged that any injuries sustained by the defendant, aside from the aforementioned wound on his left middle finger, were formed on the night of the incident, thus the prosecutor's argument lacks foundational support.

(3) The Defendant's Pajamas and the Detection of Blood and Mixed Oil

According to the relevant evidence, the defendant's blood type is type B. It is noted that on July 4, 1966, when the defendant's pajamas were seized, human blood of unknown type was found on the lower left front of the upper garment, AB type blood was found in the left chest pocket, human blood of unknown type was found on the left waist of the lower garment,

and type A blood was found on the right knee. Additionally, mixed oil was also detected. However, the investigative report stating the seizure of the pajamas mentions that near the lower left pocket of the upper garment, there were traces that could not be determined to be blood, rust, or a soy sauce stain. Furthermore, the report from the blood type analysis indicated that no visible blood-like substances were detected on either the upper or lower parts of the pajamas. Given these statements, it can be acknowledged that the blood found on the pajamas was in such small quantities that it would be difficult to confirm with the naked eye, making it less likely to be related to the commission of the crime. Additionally, since the defendant lived in the employee dormitory within the Factory, it cannot be ruled out that the mixed oil and other blood found on the pajamas may have been unrelated to the crime. Therefore, it can be said that the presence of another person's blood and mixed oil on the pajamas worn by the defendant has only limited evidentiary value, sufficient to be consistent if the defendant were the perpetrator.

(4) The Relationship Between the Pruning Knife and the Defendant

According to the relevant evidence, the possible stores in Shizuoka Prefecture that could have sold the pruning knife include three stores, such as Kikukou Knife Shop in Numazu City. Midori Takahashi, an employee at Kikukou Knife Shop, testified to the police that she was shown 28 photographs of employees (including 2 photographs of the defendant) and recognized one photograph of the defendant, indicating that he might have visited the store. However, Takahashi's testimony merely suggests the possibility that a customer resembling the defendant was among those who visited, and it does not hold evidential value as a means of identifying the defendant. Therefore, this testimony only supports the fact that someone resembling the defendant may have visited the knife shop, which does not actively suggest the defendant’s guilt. In contrast, the prosecutor argues that, based on Takahashi's testimony, it can be inferred that the defendant visited the knife shop. However, since Takahashi did not make any statements identifying the visitor as the defendant, the prosecutor's claim is clearly unfounded and cannot be accepted.

(5) The Motive of the Defendant's Crime

According to related evidence, around April of Showa 41 (1966), approximately two months before the incident, the defendant reportedly stated that if he attacked Matsushita (thought to refer to Konosuke Matsushita) from behind, he could obtain money. About a month before the incident, in May of the same year, the defendant inquired with an

employee in the sales department of the company about the sales money that Fujio would take home, jokingly commenting that there was quite a bit, and that it would be easy to knock someone out and take it.

Moreover, evidence shows that at the time of the incident, the defendant was giving nearly half of his salary, which was provided by the company, to his mother as child support for his son, and that he had taken loans from pawn shops and the company. However, the fact that the defendant made the above statements and was in financial distress does not contradict the possibility of him being the perpetrator, nor does it actively suggest his guilt. Rather, it cannot be concluded that the defendant had an urgent need for money; there is insufficient evidence to suggest that he had a motive to break into the home of someone he knew, risking exposure to the victims.

(6) Summary

Based on the above examination, it is acknowledged that the defendant sustained an injury to his left middle finger on the night of the incident and that blood from another person and mixed oil were detected on the defendant's pajamas. However, these facts possess only limited evidentiary value, which is consistent with the possibility of the defendant being the perpetrator but does not necessarily imply his guilt.

5. Comprehensive Evaluation

As discussed, the five pieces of clothing, which have been considered the most central evidence suggesting the defendant's guilt, cannot be recognized as the clothing worn during the crime or as items hidden by the defendant in tank number one after the crime. Given that these items were discovered long after the incident and were processed by the investigative authorities—such as being stained with blood, unrelated to the crime—they are deemed fabricated by the authorities. Furthermore, the fragments linking the five pieces of clothing to the defendant are also reasonably considered to be fabricated by the investigative authorities. Therefore, the five pieces of clothing and the fragments lack relevance as evidence in this case and should be excluded from consideration, as they do not support the assertion that the defendant is the perpetrator.

The facts established by the remaining evidence, excluding the five pieces of clothing, possess only limited evidentiary value, suggesting the possibility of the defendant being the perpetrator but still leaving ample room for the possibility of someone else committing the crime.

In conclusion, the factual circumstances of this case do not include any elements that would be reasonably unexplainable if the defendant were not the perpetrator, nor do they contain facts that would be extremely difficult to explain. Therefore, it cannot be concluded that the defendant is the perpetrator of this crime.

Part 5. Conclusion

Article 317 of the Code of Criminal Procedure states, "Fact determination is based on evidence," while Article 318 provides that "The probative value of evidence is left to the free judgment of the judge." However, in this case, over a long period, different conclusions and opinions have been presented by various courts.

In criminal trials, it is necessary to (1) establish the fact of the defendant's guilt based on evidence obtained through appropriate procedures, (2) recognize that the burden of proof for establishing the defendant's guilt lies with the prosecution, and that the determination of the defendant's guilt or not guilty must adhere to the principle of "innocent until proven guilty." Furthermore, (3) o find the defendant guilty, the evidence must be established to the extent that there is no room for reasonable doubt—in other words, it must be proven, in light of sound social common sense, that any suspicion of the defendant's innocence is unreasonable. In accordance with such principles of criminal trials, it cannot be concluded that the defendant is the perpetrator of this case.

Therefore, since there is no proof of a crime regarding the charges brought, I declare the defendant not guilty in accordance with Article 336 of the Code of Criminal Procedure.

End.

(Annex)

‘List of abbreviations’ (including those omitted in the summary judgment)

The company in question	limited partnership Hashimoto Fujisaku Shoten. Later reorganised as ‘Oh Kogane Miso Co. Commonly known as ‘Kogane Miso’.
Fujio	Fujio Hashimoto
Chieko	Cheko Hashimoto
Masaichiro	Masaichiro Hashimoto
Fujiko	Fujiko Hashimoto
Victims	Fujio, Chieko, Masaichiro and Fujiko
Employees	Employees of the company in this case
Factory	The miso manufacturing Factory of the company in this case
This Case	a fire broke out at around 2am on 30 June 1966 in Fujio's direction, almost completely destroying the house, and after the fire was extinguished, the bodies of a total of four victims were found.
Crime	The crime described in the indictment was committed by someone who dared to commit the crime.
Tank No. 1	Tank No. 1 at the Factory in question.
White pants	1 white pants (Exhibit No. 115 Seizure 96 from 1966)
White short-sleeved shirt	1 white short-sleeved shirt (Exhibit No. 155, Seizure 97 from 1966)
Rat-coloured sports shirt	1 rat-coloured sports shirt (Exhibit No. 155, Seizure 98 from 1966)
Iron Blue Trousers	1 pair of iron and navy blue trousers (Exhibit No. 155, Seizure 99 from 1966)
Green trousers	one pair of green trousers (Exhibit No. 155, Seizure 100 form 1966)
5 items of clothing	white pants, white short-sleeved shirt, rat-coloured sports shirt, iron-blue trousers and green trousers
Jute bag	1 jute bag (Nanking bag) (Exhibit No. 155, Seizure 102 form 1966)
Scrap	scrap (Exhibit No. 155, Seizure 103, from 1966)
Defendant's Statement Record to the Prosecutor	defendant's statement record to the prosecutor dated 9 September 1966 (sure 20, book 2712)

Final First Instance Judgment	Shizuoka District Court, 11 September 1968 (Shizuoka District Court, 1966 (WA) No. 329)
Final Court of Appeal Decision	Tokyo High Court decision of 18 May 1976 (Tokyo High Court, 1969 (U) No. 240).
Professor Honda	Professor Katsuya Honda (title as it stood at the time. Hereinafter the same.)
Honda expert opinion	DNA typing conducted by Professor Honda on the samples in question (Rejoinder 89, 90).
Decision to initiate retrial in the case	decision of the Shizuoka District Court of 27 March 2014 (2008 (TA) No. 1).
Professor Shimizu	Professor Keiko Shimizu
Assistant Professor Okuda	Assistant Professor Katsuhiro Okuda
Professor Shimizu and others	Professor Shimizu and Assistant Professor Okuda
Professor Ishimori:	Professor Koichiro Ishimori
Professor Miyashi:	Professor Satoshi Miyashi
Professor Kondo	Professor Toshikazu Kondo
Experiment in 2021	An experiment in which prosecutors immersed bloodstains on a cloth in miso and observed the colour change from September 2021 to November 2022.
Professor Ikeda	Professor Noriaki Ikeda
Professor Kanda	Professor Yoshiro Kanda
Claim ①:	The prosecutor's claim that it is strongly inferred that the perpetrator is a person connected to the Factory and that it was possible for the accused to behave in the way the perpetrator did at the time of the incident, as inferred from the evidence.
Claim ②	The Prosecutor's contention that the five items of clothing found in Tank No. 1 at the Factory were worn by the Accused at the time of the crime and hidden in Tank No. 1 after the incident.
Claim ③	the prosecutor's assertion that there are various circumstances consistent with the accused being the perpetrator.
Clothing worn during the crime	The garments worn by the perpetrator at the time of the crime.
Matsushita	Fumiko Matsushita

Inspector Matsumoto	Inspector Kyujiro Matsumoto (rank at the time of the crime in question. Same hereafter).
Lieutenant Iwamoto	Lieutenant Hiroo Iwamoto
Lieutenant Sumiyoshi	Lieutenant Chikashi Sumiyoshi
Public prosecutor Yoshimura	Public prosecutor Eizo Yoshimura
Sergeant Matsumoto	Sergeant Yoshio Matsumoto
Lieutenant Yonezu	Lieutenant Goroku Yonezu
Sergeant Morita	Sergeant Masashi Morita
Professor Hamada	Professor Sumio Hamada
Hamada Opinion	Opinion based on the expert opinion dated 9 December 1992 (Rejoinder 139), 20 June 1995 (Rejoinder 140), 1 August 2012 (Rejoinder 142) and 10 September 2017 (Rejoinder 193) prepared by Professor Hamada.
Inspector Haruta	Inspector Tatsuo Haruta
Haruta On-Site Investigation Report	On-site investigation report dated September 4, 1967, prepared by Assistant Inspector Haruta (Certified Book 17, Page 2274).
Sato Expert Report	Expert report dated September 20, 1967, prepared by Shuichi Sato (Certified Book 17, Page 2348).
Clothing Photo Compilation	A photo compilation titled "Shimizu City Yokozuna Kai Rishige Executive Family Murder Robbery Arson Case (Clothing Edition)" (Reiwa 5, Item 3, Seizure 17, Re-exhibit 38).
Professor Kobayashi	Professor Hiroyuki Kobayashi
Nakanishi Experiment	An experiment conducted by Associate Professor Hiroaki Nakanishi to assess the degradation level of DNA from human blood that had been pickled in miso (Re-exhibit 135, Rebuttal Document 6).
Fiscal Year 2021 Experimental Investigation Report	An investigation report prepared by the prosecutor, which includes observations of the miso-pickled samples and attached photographs documenting the conditions during the Fiscal Year 2021 experiment (Re-exhibits 176 to 183, 197, 201, 206, 212, 219).
Professor Tonami	Professor Hiroaki Tonami
Professor Sawatari	Professor Chie Sawatari

Sawatari Evaluation	Opinion based on Professor Sawatari's evaluation report (Rebuttal Document 267)
Professor Saito	Professor Kazuyuki Saito
Confirmation Memo	"Verification of Experimental Materials (Memo)" prepared by the court clerk (Rebuttal Document 33)
pH	The hydrogen ion concentration index, where pH 7 is neutral, pH above 7 indicates alkalinity, and pH below 7 indicates acidity.
Professor Kanda et al	Seven individuals, including Professor Kanda, who prepared the joint evaluation report (Re-exhibit 237)
ppb	Parts per billion (1 in 1,000,000,000)
ppm	Parts per million (1 in 1,000,000)
The samples in this case	Samples collected from the areas where bloodstains were found on the five pieces of clothing, as well as samples collected from the victims' clothing.
Yamada Evaluation	DNA testing and other evaluations conducted by Professor Yoshihiro Yamada on materials collected from areas near the samples in this case (Re-exhibit 64, 65; Rebuttal Document 91, 92).
Control Material	Samples collected from areas where no bloodstains were found on the five pieces of clothing or the victims' clothing.
Lieutenant Iwata	Lieutenant Takeharu Iwata
Investigation in this case	The search of the defendant's family home conducted on September 12, 1967.
Envelope in this case	"One double envelope" (Seiko 41, Exhibit No. 155, Mark 47).
Stationery in this case	"One letter (notepaper)" (Seiko 41, Exhibit No. 155, Mark 48).
Currency in this case	18 banknotes (Seiko 41, Exhibit No. 155, Marks 49 to 53).
Currency and related items in this case	The envelope, stationery, and banknotes mentioned above.
Raincoat in this case	"One raincoat (burnt)" discovered in the courtyard of the Fujio residence (Seiko 41, Exhibit No. 155, Mark 5).
Ueno Evaluation	Opinion based on the evaluation report dated March 18, 1972, prepared by Masayoshi Ueno (Confirmed Volume 26, Page 1477).

Naito Evaluation	Opinion based on the evaluation report dated February 25, 1975, prepared by Michioki Naito (Confirmed Volume 27, Page 1858).
Knife	"One paring knife (without a handle or sheath)" discovered at the Fujio residence (Seiko 41, Exhibit No. 155, Mark 4).
Oshida Opinion	Two response letters from Professor Shigeru Oshida (Rebuttal Document 208, 211), forming the basis for the opinion.
Yokoyama Evaluation	Opinion based on the evaluation report prepared by Dr. Masayoshi Yokoyama (Rebuttal Document 207).
The can in this case	A can of mixed oil placed by Kengo Sato in front of the triangular room.
Clothing, etc. of victims	blankets found on and under the head of Chiruko's body, victims' burnt clothes, men's trousers and cardboard found near the head of Fujio's body.
Shinoda Evaluation Report	Evaluation report dated October 20, 1966, prepared by Tsutomu Shinoda and another individual (Confirmed Volume 15, Page 1708).
Nakazawa Evaluation	Opinion based on the evaluation report dated November 30, 1971, prepared by Yasuo Nakazawa (Confirmed Volume 25, Page 1).
Abe Evaluation	Opinion based on the evaluation report dated December 20, 1967, prepared by Hiroshi Abe (Confirmed Volume 19, Page 2575).
Lieutenant Kuroyanagi	Lieutenant Saburo Kuroyanagi

End.