Abstract: The case note investigates the problem of the ascertainment of the causal link in mesothelioma cases consequent to negligent exposure to asbestos dust in Italian tort law and that of the relationship between the judicial ascertainment and the expert opinion.

Problems arising out of the establishment of causation in mesothelioma cases of negligent exposure to limited amounts of asbestos dust:

Although mesothelioma is considered a “signature disease”, because it is generally the consequence of asbestos exposure, the ascertainment of the causal link between the exposure and the occurrence of this illness is often made difficult by the lack of scientific certainty on its aetiology.

In fact, while what is generally called the “single fibre theory” affirms that mesothelioma is triggered by a single asbestos fibre, and that therefore subsequent exposures to the same noxious agent have no causative effect on the development of the illness, the so called “multi-fibre theory” holds that all or a set of asbestos fibres in the lungs jointly ingenerate chemicals mutations that initiate the onset of the disease.

Where the first scientific theory is applied, the petitioner must prove that the defendant exposed the victim to the fibre that caused the mesothelioma set off, while the adoption of the second theory entails that the same petitioner demonstrates that the defendant contributed to the exposure that caused the pathology.

Therefore, the choice of one of the two theories requires the application of a different legal rule of ascertainment of the causation. This choice is always an unenviable task for the judge because, although the reliability of the “single fibre theory” has perhaps lately diminished, mainly due to recent researches, both theories are acknowledged by the scientific community.

Moreover, if the traditional but for test were applied in those cases, it would be generally very difficult or even impossible for the petitioners to prove that the exposure of the negligent defendants caused the mesothelioma.

The House of Lords faced these problems in the well known Fairchild case, where the petitioners, exposed to asbestos fibres by several different negligent employers, were not able to demonstrate, on the balance of probability, which of them caused the mesothelioma. In that


2 Fairchild v Glenhaven Funeral Services Ltd [2002] UKHL 22; [2003] 1 AC 32
occasion, following *McGhee v. National Coal Board*⁴, the House of Lords held the joint and several liability of the defendants that had materially increased the risk of harm of the plaintiffs, violating their duties to protect them against that very harm.

This rule, to some extend later confirmed by the same Court in *Barker v Corus UK Ltd*⁴, was then finally enacted by the Parliament in its current form in the Section 3 of the Compensation Act 2006. That Section states that when a victim contracts mesothelioma each person who has, in breach of duty, been responsible for exposing the victim to a significant quantity of asbestos dust and thus for creating a “material increase in risk” of the victim contracting the disease will be held jointly and severally liable for causing the disease.

Nevertheless, this prescription was not able to settle all the problems concerning the ascertainment of the causal link in mesothelioma cases. It was for example not clear if the so called “Fairchild rule” had to be applied in cases where the defendant was only responsible for a limited amount of the exposure, and the main exposure to asbestos fibers was environmental or from other legal sources.

Two cases concerning that issue were lately discussed in front of the Supreme Court in the *Sienkiewicz* case. In both cases the sole defendant caused a negligent exposure to asbestos of limited amount, especially if compared to the environmental exposure of the victims.

The Supreme Court excluded the application of the conventional causation test of the balance of probability to mesothelioma cases, and held the liability of the defendants, affirming that also in those cases the Section 3 of the Compensation Act applies.

Before investigating the attitude of Italian Courts when confronted to similar cases, I would like to point out the attention of the readers to some question raised in the *Sienkiewicz* decision that could also be relevant in the Italian system.

The first problem is that of the limits of the reliability and adequacy of epidemiological evidence in cases of mesothelioma.

This issue was pointed out by Lord Phillips, that underlined the difficulty in collating sound epidemiological data and of obtaining reliable evidence as to the relevant experience of the victim, and the uncertainty as to the adequacy of the epidemiological evidence that is available as a guide to causation⁵.

In his opinion, the adoption of the special rule of causation applied in *Fairchild* and *Barker* is justified by the cumulative effect of subsequent, different exposures and by the current scientific knowledge. Therefore, where there is no known lower threshold of the exposure that is capable of

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³ *McGhee v. National Coal Board* [1973] 1 WLR 1


causing mesothelioma, also a very low level of asbestos exposure must be deemed sufficient to cause the disease, unless that same exposure is insignificant compared to the exposure from other sources.\(^6\)

The second issue is that of the proof of the essential elements.

As Lord Rodger remembers, the \textit{Fairchild} exception constitutes a balance between the interests of claimants and defendants in the difficult mesothelioma cases. Consequently, judges must take a rigorous approach to the proof of the essential elements.\(^7\) Opinion openly shared by Lady Hale.\(^8\)

The third and last issue is that of the consequences of the application of the \textit{Fairchild} exception in mesothelioma cases.

The problem is pointed out by Lord Brown, which underlines the unjust results that the application of a rule different from the \textit{but for test} to mesothelioma cases brings about and therefore calls for a reversal of the \textit{Fairchild} principle, allowing no exception whatever to the normal rule of causation.\(^9\)

My investigation of the Italian case-law concerning mesothelioma will, as much as possible, concentrate on these issues.

\textbf{The issue of the ascertainment of causation in mesothelioma cases in Italian case-law}

The Italian general rule in civil liability provides that the defendant can be held liable for damage when the existence of a link of causation between the action of the defendant and the harm can be proved, and that the onus of that proof lies with the petitioner.

The test commonly used to ascertain the existence of a causal link is the \textit{conditio sine qua non} test, essentially equivalent to the English \textit{but for test}, or alike tests based on the finding of the sole element that caused the damage. Therefore the Italian general system of civil liability does not actually differ from the English traditional one.

Differently from English courts, Italian courts never developed a special test for the ascertainment of the causation in mesothelioma cases.

Nevertheless, it must be pointed out that Italian decisions concerning mesothelioma cases are often the outcome of the application of criteria based more on ‘intra-case’ considerations than on general principles of law, and those same decisions can be quite inconsistent with each other.

The criteria used by Italian civil courts to ascertain the liability of the defendant can be roughly divided into three main categories.

\(^7\) \textit{Sienkiewicz v. Greif (UK) Limited} [2011] UKSC 10, para 166
\(^8\) \textit{Sienkiewicz v. Greif (UK) Limited} [2011] UKSC 10, para 173
Liability can be found excluding the possibility that the mesothelioma could be caused by another factor, especially in cases where the only known poisonous exposure was that caused by the defendant\textsuperscript{10}.

Or, when it could not be excluded with certainty the existence of other possible causes of the disease, different from the exposure caused by the defendant, the judge can held the defendant liable because he believes there is a high probability that his negligent exposure was the cause of the mesothelioma.\textsuperscript{11}

Lastly, the Corte di Cassazione affirmed in two occasions that the defendant is to be held liable when he failed to provide security measures sufficient to reduce the risk of the occurrence of the mesothelioma.\textsuperscript{12} In both occasions it stated that the ascertainment of the causation link between the working exposure and the cancer occurrence must be examined on the basis of the measures of reduction of the risk that the defendant provided.

This rule was also later applied by the same Court in a case of cancer of the lungs, which could have been caused by different pathogenic factors, and occurred in a smoker\textsuperscript{13}.

The principle on which this principle is based is the criterion of the probabilistic possibility of a relationship between the action or omission of the defendant and either the increase or reduction of the risk of the harm.

It is important to point out to the readers that the diversity of the rules applied by Italian civil courts in the ascertainment of the causation generates uncertainties in the protection of the rights of those suffering from mesothelioma because of asbestos exposure, providing a reason for the harmed party to seek protection in the often more comfortable criminal procedure.

Similar but specular problems are faced by the defendants and their insurers that, because of the uncertainties on the causation criteria, are unable to predict the outcome of the civil proceedings, and consequently the measure of their future financial obligations.\textsuperscript{14}

\textsuperscript{10} As in, for example, Trib. Venezia, 21 maggio 2003, n° 1791, unpublished
\textsuperscript{11} Read, for example, Trib. Trieste, 25 febbraio 2004, n. 103, in Giur. it. (Giurisprudenza Italiana), 2005, p 497, with note by N. COGGIOLA, "L’esposizione alle polveri d’amianto ed il nesso di causalità di fronte al giudice civile"
\textsuperscript{14} For further information in English on the issue of mesothelioma cases in the Italian civil courts please read N. COGGIOLA, Asbestos Cases in the Italian Courts: Duelling with Uncertainty, in InDret, 2009, p 1
The issue of the relationship between scientific theories and judicial reasoning in Italian case-law

The issue of the limits of the relationship between scientific theories and judicial reasoning has recently been debated by the Italian criminal section of the Corte di Cassazione.

The case concerned a criminal proceeding against 14 managers and directors of a large company, for the non malicious death of some workers, caused by asbestosis or mesothelioma, and a civil proceeding against the same company for the compensation of the damage.

The court of first instance condemned the accused only for the deaths caused by the asbestosis, while excluded their liability for those caused by the mesothelioma. In its opinion it was in fact impossible to ascertain if the fibres inhaled by the workers that caused or aggravated the mesotheliomas were attributable to the accused and there was no scientific certainty on the reliability of the multi-fibre theory.\(^\text{15}\)

The Corte di Appello of Torino reversed this latter decision, and therefore condemned the managers and directors of the company also for the deaths caused by the mesothelioma.\(^\text{16}\)

The scientific expert appointed by the Court had in fact affirmed that the mesothelioma is notoriously an illness caused by the asbestos exposure, and that all the dead workers had been professionally exposed to asbestos fibres in the factory.

On the basis of this scientific opinion, the Corte di Appello decided to adhere to the multi-fibre theory in the ascertainment of the causation. In its consideration, due to the prolonged exposure of the workers to asbestos dust and their poor working conditions, the application of this test to the case could be excluded only if it were proved that the mesothelioma was the consequence of the first asbestos exposure.

Moreover, the same Court affirmed that, besides, the same extended exposure had augment the risk to develop the mesothelioma, and therefore could be regarded as a concurrent cause of the deaths.

In the own words of the Corte d’Appello, this judgment on the causation was not the consequence of a scientific assessment, but more plainly the result of its reasonable adherence to a scientific theory.

The condemned appealed against this sentence to the Forth Criminal Section of the Corte di Cassazione, which investigated in its sentence n° 38991 of the 4\(^\text{th}\) November 2010 the problem of the ascertainment of causation in cases of scientific uncertainty.\(^\text{17}\)

\(^{15}\) Tribunale di Verbania, 1\(^\text{st}\) giugno 2007, unpublished
\(^{16}\) Corte di Appello of Torino, 25 march 2009, unpublished
In its opinion the Court acknowledged that the judge must avail himself of scientific criteria when he is asked to ascertain the causation in cases in which the injury was the consequence of an omission of the accused. These scientific criteria can be distinguished in “general rules” and “statistical rules”: the first apply to every situation, without exceptions, while the latter only establish the existence of a causal relationship in a percentage of situations.

Nevertheless, the same Court of Cassazione also reminded that those scientific criteria must be coupled with the “logical probability” that, in the case under discussion, the damage was the consequence of a certain action or omission.

Therefore, causation can be held in cases of low statistical probability, when other causal factors can be excluded, and can be instead denied in cases where the statistical probability is very high.

In the opinion of the Cassazione where, as in the case under examination, there exist two contrasting scientific theories on the link of causation (the “multi-fibre theory” and the “single fibre theory”) the judge must exclude the existence of other possible alternative causes of the damage, different from the cause under investigation and verify the reliability of the scientific theory to be applied in the case.

Scientific theories, in fact, are to be deemed as mere instruments to prove the facts.

Consequently, when faced with contrasting scientific theories, the judge must explain in his reasoning the motives of his decision in favour of the application of one scientific theory, on the basis of the following parameters: the epistemological reasoning must be the outcome of the dialectic of the different opinions; the judge doesn’t creates the rules, but simply discovers them; the ascertainment of causation must be without any reasonable doubt.

The decision of the Corte di Cassazione clearly sets forth three clear principles concerning the relationship between the scientific expert opinion and the judge assessment in the ascertainment of causation.

Firstly, the judge must critically evaluate scientific opinions, and not passively adhere to them.

Secondly, the judge’s duty is to apply the scientific rules, not to work them out.

Finally, there must be no reasonable doubt in the ascertainment of the causation based on a scientific theory.

Due to the complexity of the task, the judge must therefore clearly explain his choices, when these are based on scientific theories not acknowledged by the entire scientific community.

Certainly, this sentence of the Corte di Cassazione is a further step in the development of Italian case law on the issue of the relationship between the judicial evaluation and the use of
scientific proof, after the notorious decision Franzese, of the Criminal Joint Sections of the Corte di Cassazione. 18

In those case the Court held that to ascertain the causation in cases of medical malpractice in which the damage is the consequence of an omission the judge must evaluate not only the “statistical probability”, but also the “logical probability”. This latter is based on an inductive reasoning, and takes into consideration the feasibility of the use of the statistical law in the actual case under examination and the rationality of the judicial assessment.

That rule was later used by the same Corte di Cassazione in later criminal sentences concerning mesothelioma cases.19

**Conclusion**

The complexity of the modern world increasingly requires that judges employ scientific theories in the evaluation of judicial cases. Therefore, both Italian and foreign courts are often compelled to confront with scientific issues, as in cases of mesothelioma damage.

Furthermore, as science has become an highly specialized discipline, intelligible by a few experts of the field, judges are frequently obliged to ask for expert scientific opinions and explanations. In these cases there is the concrete risk that the judge reasoning is the product of his uncritical adoption of the scientific theory, rather then the autonomous judicial decision it should be.

The opinion of the Italian criminal branch of the Corte di Cassazione on the issue is that judges cannot elaborate scientific theories but at the same time they must critically evaluate the opinion of the experts.

Finally, it must be underlined that the civil branch of the same Corte di Cassazione has not yet pronounced on the same problem, and it is not improbable that the issue will not be debated by that Court for a long time.

Traditionally, in fact, the civil branch of the Corte di Cassazione is generally reluctant to deal with the issue of the cause-in-fact test to be applied in the decisions, because in its opinion such an investigation, concerning the mere facts of the case, lies within the exclusive competence of

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18 Cass., SS.UU., 10 luglio 2002, n. 30328, Franzese, in Foro it. (Foro Italiano), 2002, II, p 601, with note by O. DI GIOVINE, "La causalità omissiva in campo medico-chirurgico al vaglio delle sezioni unite"; in Dir. e giust. (Diritto e giustizia), 2002, p 21, with note by V. PEZZELLA; in Danno e resp. (Danno e responsabilità), 2003, p 195, with note by S. CACACE, "L'omissione del medico e il rispetto della presunzione d'innocenza nell'accertamento del nesso causale"

the lower courts and should not be criticized by the Cassazione, as long as the lower court judges reasoning is clearly articulated.20

Only lately this attitude was partly reversed, in cases concerning damages arising out of infected blood transfusions and blood products, decided by the civil Joint Sections of the Corte di Cassazione on 11 January 2008,21 and in cases of medical malpractice.22

In all these decisions the Court clearly stated that the investigation of causation in civil cases follows paths and rules that are different from those of criminal cases. From that assertion it could be inferred that the Franzese principles, are no longer applicable in civil cases. Therefore it could be deduced that also the latter decision of the criminal branch of the Corte di Cassazione will most probably have no influence on the rules governing the ascertainment of causation in civil mesothelioma cases.23

22 Cass., III° Sez., 16 ottobre 2007, n° 21.619, in Danno e resp., 2008, p 43, with comment by R. PUCELLA; Corr. giur., 2008, I, p 35, with note by M BONA, "Causalità civile: il decalogo della Cassazione a due "dimensioni di analisi”", affirming that the different approach is evident even with regards to the probation issue