

## Is EU Law Neuro-Friendly?

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The question put to this panel is « is your system neuro-friendly ? ». On the program, Belgium stands after my name, but I should confess right at the outset that I don't know much about the Belgian legal system. I studied in France and in the UK. At the moment, I am exercising my right to free movement and work in Belgium, where I teach, well... EU law. « My » system, therefore – If I can use the possessive – really is the EU legal system.

After this admission, you could be forgiven for thinking I came to Milan for the sake of Italy because, in truth, EU law as it stands *does not* rule on admissibility of evidence, therefore also not on admissibility of Neuroscientific-evidence. In deed, admissibility of evidence in a civil or criminal trial is a matter for national law.

Although I gladly plead guilty on the charge of being prejudiced in favour of Italy, I also came to tell you something about how neuro-friendly EU law is or could be. Before I present my remarks in this regard, I should stress that neuro-friendliness of EU law cannot be assessed only in connexion with criminal law. I will start from there but then move on to private EU law, taking two examples: one in trade mark law and the other in consumer law.

### 1. EU law and admissibility of neuro-scientific evidence

I just stated that EU law does not govern admissibility of evidence. This is generally true, but two caveats ought to be mentioned.

- **First caveat: admissibility of evidence before EU courts** is of course a matter of EU law. However, in the rules of procedure applicable before the EU courts (General Court and Court of Justice), there is very little on admissibility of evidence generally and nothing on admissibility of scientific evidence in particular<sup>1</sup>. It is therefore a matter of case law.

And that case law is scarce. In deed, EU courts have not often been confronted with neuro-scientific evidence. Exceptions include neurotoxicity studies in chemical substance cases<sup>2</sup> and neurological evidence in staff cases (including one about a civil servant of the European Parliament who had been convicted of statutory rape by a criminal court in Brussels and had his sentence reduced on

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<sup>1</sup> The only provisions of the rules of procedure applicable before EU courts concerning admissibility of evidence deal with the language in which oral testimony may be given (art. 29 of the RoP of the Court, art. 35 of the RoP of the General Court), oath witnesses are asked to take (art. 47 of RoP of the Court, art. 68 of RoP of the General Court), objections against witnesses (art. 50 of the RoP of the Court, art. 73 of the RoP of the General Court) and the timing for submitting evidence (art. 42 and art. 62a of RoP of the Court, art. 48 and art. 76a of RoP of the General Court). RoP of the Court are published in OJ 2010, C-177/1 ; RoP of the General Court are published in OJ 2010, C-177/37.

<sup>2</sup> See for example : Case T-229/04, Sweden v. Commission, ECR

grounds of his neurological condition<sup>3</sup>). The fact that there are very few European cases involving neuro-evidence is hardly surprising, because EU courts do not deal with the one field in which most NS evidence is adduced for the time being, i.e. criminal law. The types of scientific evidence EU courts are confronted with draw on economics/econometrics (in the field of competition law), on chemistry and medicine (in the field of food law), not (yet) on NS.

- **Second caveat: there are instruments of EU law concerning evidence.** In the field of judicial cooperation, there are two instruments
  - o In civil and commercial matters: the regulation on taking of evidence<sup>4</sup>
  - o In criminal matters: the evidence warrant<sup>5</sup>

Neither of these instruments harmonise national laws on admissibility of evidence. What these instruments do is that they *facilitate circulation of pieces of evidence located in one MS when a Court sitting in another MS needs them*. For example, the evidence warrant would allow – despite its many limitations – a criminal judge sitting in Milan to request the results of a brain scan taken, say, in Belgium to be forwarded to her provided these results exist at the time of the request. The Milan criminal judge could not however use this instrument to request a witness to be brain-scanned in Belgium as the evidence warrant only applies to existing documents and data.

In civil and commercial matters on the other hand, nothing in the regulation on taking of evidence would seem to prevent a Milanese judge to use the simplified procedure set up by this instrument to request his Belgian counterpart to order that a person be examined using a brain scan.

In criminal matters, a new broader instrument on taking of evidence is currently being discussed in the Council. Like the instrument available in civil and commercial matters, it could cover all kinds of evidence relevant to a criminal investigation – as opposed to being restricted to existing evidence of a specific nature. This would confront courts more directly with differing national rules on admissibility of evidence in general and of scientific evidence in particular. Such a development could, in turn, lead to some measure of harmonisation as the Lisbon treaty provides a legal basis for this (article 82, para. 3), but this is probably not going to happen in the near future.

- In other words, EU law does not currently deal with admissibility of scientific evidence, but the free movement of evidence it set out to organise will, in time, create confrontation – if not competition – among national procedural laws concerning, *inter alia*, admissibility of scientific evidence.

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<sup>3</sup> Cases T-144/96. See also Case T-84/98 concerning the medical condition of a secretary of the European Parliament who suffered brain damage after an accident. Note that in staff cases, the EU Courts perform limited judicial review of administrative decision. In this context, they neither re-assess evidence, nor do they request new evidence.

<sup>4</sup> Council Regulation (EC) No 1206/2001 of 28 May 2001 on cooperation between the courts of the Member States in the taking of evidence in civil or commercial matters, OJ L 174, 27.6.2001, p. 1–24.

<sup>5</sup> Council Framework Decision 2008/978/JHA of 18 December 2008 on the European evidence warrant for the purpose of obtaining objects, documents and data for use in proceedings in criminal matters, OJ L 350, 30.12.2008, p. 72–92.

Moving on now to where EU law *as it stands* does or could meet neuro-science, I would like to take two examples, one in the field of trade mark and one in the field of consumer protection.

## **2. Where neuro-scientific evidence could be relevant: an example from EU trade mark law**

In several member states, trade mark offices have been confronted with applications for olfactory trade marks, i.e. applications to register a smell as a distinctive sign. Because national laws on trade mark are partially harmonised by EU law, legal questions raised by such cases have sometimes reached the Court of justice by way of requests for preliminary rulings. An example is the Ralf Sieckmann case (Case C-273/00). In itself, the judgement in this case is not remarkable: the Court rules that the first directive on trade mark should be interpreted as meaning that

- any distinctive sign can in principle be registered as a trade mark. It doesn't have to be a visual sign, like a sequence of letters or a particular design, it can also be a smell
- but the distinctive sign should be capable of being represented graphically in a manner that is clear, precise, self-contained, easily accessible, intelligible, durable and objective, all of which are difficult conditions to meet for any graphic representation of a smell

The reason why this case is worth mentioning is because the opinion of Advocate General Colomer highlights very clearly the relevance of neuro-science to the interpretation of the first trade mark directive in a case such as this one. Again, the question was: "can a smell be registered as trade mark?". The first condition to be met – I'm leaving the second condition aside – is that the sign, here the smell, should be distinctive.

In order to answer this legal question, it is necessary to assess whether humans are in general capable of recognising a smell and associating it with a particular memory. Common sense suggests it is the case. Yet, it is worth noting that, in his opinion, AG Colomer looked for literature to support this intuition. He cites a study by a legal scholar, who refers to neuroscience of perception. He takes from this article that

"studies of the perception of odours have shown that the olfactory memory is probably the best one that humans possess"<sup>6</sup>.

He then continues

"The sense of smell is, because of its special function in the nervous system, very closely linked to the limbic structures that affect memories and emotions. According to the latest discoveries in neurophysiology, memories and emotions are closely interlinked, as Marcel Proust well understood"<sup>7</sup>.

In this particular case, NS "evidence" was not decisive, because smells, even if they can be distinctive, failed on the other criterion, that of suitability for graphical representation.

In my view, it nevertheless brings 2 interesting elements to the discussion:

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<sup>6</sup> Opinion in case C-273/00, Ralf Sieckmann, ECR 2002 p. I-11737, para. 29.

<sup>7</sup> Ibid.

- The first element is to do with the nature of “evidence” that is useful in the judicial process. It is not only case-specific evidence: here the question was not “does this person remember smells?” but “do people generally remember smells?”. It is a *general statement* about our perception that is of interest to the law. This is important for two reasons.
  - First, scientists generally feel much more comfortable making this sort of general statements as opposed to case-specific statements;
  - Second, when science is fed into the judicial decision-making process through judicial notice rather than through case-specific expert evidence, the cost is less and it is not borne by the parties.

Of course, these two means of absorbing science will not be available alternatives in all cases. The point here is only that there are several different ways to bring (neuro-)scientific knowledge to bear on the law depending on how the legal question is framed. Adducing expensive case-specific evidence is not the only one.

In deed, and this is what I want to illustrate with my second and last example, one way law absorbs general scientific knowledge is through creating presumptions. I don’t know if presumptions based on NS are already accepted by courts in the EU – this is an empirical question worth investigating – but I can think of a field of law in which it would make sense, namely consumer law. Part of consumer law is about affording protection against undue influence on consumer behaviour, whether through advertising or other unfair commercial practices.

### **3. Where neuro-scientific evidence could lead to presumptions: an example from EU consumer law**

The directive on unfair commercial practices harmonises national laws on this subject matter. It defines the commercial practices that ought to be prohibited in all 27 national legal systems. The general definition of an unfair practice contains 2 criteria: in order to be “unfair” within the meaning of the directive, the practice needs to be

- contrary to professional diligence (first puzzle, but I leave it aside here)
- it materially distorts or is likely to materially distort the economic behaviour with regard to the product of the average consumer whom it reaches or to whom it is addressed, or of the average member of the group when a commercial practice is directed to a particular group of consumers

How does a judge know if a given commercial practice is likely to materially distort the choice pattern of consumers? Studies by psychologist shed some light on this question. Some influencing techniques are well documented – and they are taught in marketing courses. But this may not be enough in a disputed case. In order to assess the likelihood that a given technique alters behaviour of the average shopper, it would certainly be relevant to know *how* it could influence choice (or to question the same, depending which side of the argument you are on). Neuro-science could be called on to shed light on such questions as:

- how does the sequence of information given to a consumer affect her decision?
- does the promise of a “free gift” affect choice even where the consumer is then told the store ran out of gifts before she makes the purchase?

And if it does, this knowledge would not only be relevant once, for one particular trial. By its very nature, it would be suitable to be translated as a presumption, provided it is robust enough.

My point really is: if marketing departments use neuro-imaging – and they do – it is likely that neuro-evidence could be presented in cases where the influencing power of a marketing technique is at stake. When it is presented, its value will not be case-specific. It would be commercial practice-specific.

The take-home message is three fold:

- EU law does not contain specific rules on admissibility of scientific evidence, but by organising circulation of evidence across member states it could, in time, lead to approximation of national laws
- neuro-evidence is not only relevant to criminal trials, it is also relevant to fields of law where the reaction of consumers to particular stimuli has to be assessed
- neuro-evidence worthy of study is not limited to trial-specific evidence