

"THE WAR OF THE PATENTS"

by Paolo Mondani

In collaboration with Cataldo Ciccolella

MILENA GABANELLI, IN STUDIO

Good evening. Mafias are changing shape—what are we doing to combat them? That will come after tonight's investigation, which takes us into the world of patents. You have a trademark, you register it; you have an idea, you protect it. But maybe not, because counterfeiting in the world of pharmaceuticals, for instance, as we will see, is a surreptitious force, and then there are the violent legal battles that are often waged over a piece of paper, sometimes over a comma or some pretext. This here, for example, called "pinch to zoom", was fought over for millions by Apple and Samsung. One invents it, the other copies it, but then you market it and cash in on it, and even if you end up paying a billion for it, if you have made five billion, it's worth it. The countries that make the most money from the royalties of their inventions, compared to those who pay for the inventions of others, are the United States, Japan and Germany. And what about us? We are a nation of inventors but in Europe patents are controlled by this man, chairman of an organization that is virtually as autonomous as a state. Over to Paolo Mondani.

MATTEO RENZI, 04/04/2016

Good luck to Sergio Marchionne. Thanks for having accepted our call to list here in Milan.

PAOLO MONDANI, OFF-SCREEN

So said Matteo Renzi last January 4th, the day Ferrari was listed for trading on the Milan stock exchange. Shame it was Ferrari NV that was listed, a holding registered in the Netherlands by Sergio Marchionne last year. But why the Netherlands?

TOMMASO DI TANNO – TAX LAW SPECIALIST

The reason is essentially that the Netherlands is a very flexible country, with a very flexible tax administration, with which special arrangements can be made. Obviously, the bigger the taxpayer, the more money is at stake, and the more willing the Dutch tax administration will be to show, let's say, tolerance, to be open to the potential new taxpayer.

PAOLO MONDANI

Marchionne has repeatedly stated that they will continue to pay taxes in Italy, however...

TOMMASO DI TANNO – TAX LAW SPECIALIST

Yes, Ferrari generates wealth not only from its cars but also from the trademark, the value of the trademark, the value of the technology. Which means...

PAOLO MONDANI

Which means patents...

TOMMASO DI TANNO – TAX LAW SPECIALIST

You need to see where the patents are, where the trademark is.

PAOLO MONDANI

Since a Ferrari company is registered in the Netherlands, obviously to save on tax, let's suppose it takes the trademarks and patents with it. What happens?

TOMMASO DI TANNO – TAX LAW SPECIALIST

What happens is that the taxable income generated by the profits from those patents is transferred from Italy to the Netherlands, which consequently lowers the taxable income and the amount of tax to be paid in Italy, while raising the tax to be paid in the Netherlands. However, Dutch taxes are lower than Italian taxes, so there is a damage for Italy, a benefit for the Netherlands and an additional benefit for the shareholders of the company in question.

PAOLO MONDANI, OFF-SCREEN

Switzerland has lost its appeal and in Europe countries can set tax rates as they like, which is why the world's biggest corporations have transferred their trademarks and patents to the Netherlands and Ireland, where taxes are very low. Why only trademarks and patents?

TOMMASO DI TANNO – TAX LAW SPECIALIST

If I am the proprietor of the Ferrari trademark and I sub-license the Ferrari trademark not only for the production of cars but also for the production of perfumes, of bags, of belts, or jackets, as is actually happening, for every jacket sold I earn a royalty of x per cent—15%, 20% or whatever it is. So there is a huge advantage in transferring the trademark, while there is none, or very little advantage in transferring production operations.

PAOLO MONDANI, OFF-SCREEN

Ferrari is worth €8 billion and a major part of that value comes from its trademarks and patents. If an Italian company transfers these assets to a company domiciled in a tax haven, how much can it save?

GIULIO ANDREANI – TAX LAW SPECIALIST

In Italy, companies pay a tax rate of 31.4%. If you assume that in another country income is taxed at a rate of 10%, what happens is this: the foreign company, on the royalties earned from the Italian company for the use of the trademark and the patent, pays taxes amounting to 10%, while the Italian company, by paying those royalties, saves on taxes in the amount of 31.4%. The difference is the tax saving, which is legitimate if the transaction is real and illegitimate if the transaction is fake, that is, if the company does not really exist abroad but is only made to look foreign, if it is domiciled abroad only on paper.

PAOLO MONDANI, OFF-SCREEN

The 2015 Stability Law in Italy introduced the "Patent Box". Currently, income from trademarks and patents are taxed at a rate of 31.4 per cent, but with the Patent Box that rate is halved to 16 per cent. What happens in the rest of Europe?

GIULIO ANDREANI – TAX LAW SPECIALIST

France... it was introduced in France, for example, in 2001 at a tax rate of around 15 per cent. In Hungary it was introduced in 2003 at a tax rate of 9.5 per cent. In the Netherlands it was introduced in 2007 at a tax rate of 5 per cent. In Spain, since 2008, 12 per cent. In the United Kingdom, since 2013, 10 per cent. In Belgium, since 2007, 6.8 per cent. In Cyprus, since 2012, 2.5 per cent. In Malta, since 2010, the income is not taxed. In Switzerland, since 2011, 8.84 per cent. In Portugal, since 2014, 15 per cent. We came after Portugal.

PAOLO MONDANI, OFF-SCREEN

All lower than in Italy. So that's why the Netherlands, with its 5 per cent tax on trademarks and patents, offers Ferrari a nice boost.

PAOLO MONDANI

It makes me think that, compared to Italy, which, once it comes into effect, will have a rate of 16...

GIULIO ANDREANI – TAX LAW SPECIALIST

They are always lower, you say... In fact, I don't believe any foreign companies will come to Italy for the Patent Box.

MILENA GABANELLI, IN STUDIO

Indeed, the law was designed to make us more competitive. But how do you separate the hundreds of millions of euros in earnings on which you pay corporate income tax from earnings from trademarks and patents? In Ferrari's case it is easy: the cars are built here, so the perimeter is clear and you pay here, whereas for the engines, the bikes, the hats, the perfumes, the jackets, they are all trademarks and starting from next year you can pay 16 per cent—5 if you go to the Netherlands. But with a shoe, for instance, with a breathable sole, what do you separate? All the accounts that led to the invention of the shoe and intangible assets. But what are intangible assets? The Revenue Agency is still defining them as we speak. All this to help drive innovation, so as not to transfer trademarks to places where you pay less. You might say, "well then, lower the rate", but there will always be a country that goes lower still. And a Europe where wars like these are waged will only become weaker and weaker, and here we are, once again, saying how Germany does things well, as it is the only country in Europe that tells its businesses: pay what is fair, but pay it all here and do not split up anything, or if you want to go, there's the door, but take it all with you, the companies and the workshops; don't pretend to have some little office in Amsterdam or there will be trouble. That's because the money has to go back into the country that generates it, otherwise you inevitably become an outlier.

PAOLO MONDANI, OFF-SCREEN

Inside this phone there are more than a hundred thousand patents that determine some 30 per cent of its value. Inventions and patents are the heart of the economy. In 2014, the number of new Italian patents was below the European average; 2015 went a whole lot better. Yet only 1.3 per cent of GDP goes into research and development, and in the patents per capita rankings, we rank just eighteenth in the world—behind Singapore and Korea. Yet there's no shortage of inventors. Two youngsters from Milazzo took the waste product from hemp and drowned it in a thermoplastic resin...

ANTONIO CARUSO – FOUNDER OF KANESIS

This is a filament of hemp bioplastic, what we have called HBP. This filament can be used without any problems in any 3D printer that uses FDM technology, because this has to be taken into account. Our filament here is for FDM printers, which use filaments.

GIOVANNI MILAZZO – FOUNDER OF KANESIS

It is more resistant than petrochemical plastics. The latest tensile tests show it is more resistant than aluminium 60/60, which is used for structural beams. It is 30 per cent lighter than common plastics. And it is cheaper than the cheapest bioplastics around.

ANTONIO CARUSO – FOUNDER OF KANESIS

Over the last year, we've had lots of contacts, lots of interest—companies, individuals, angel investors, venture capitalists. Many presumed, and it is a presumption to say, "you can't do it, give it to us and we'll give you... we will increase the value of your patent 10, 100, 1000 times." We received some really enticing offers, for two guys aged 27 and 24.

PAOLO MONDANI

Why did you choose to register a patent in an age when, as I am sure you know, everything is open source?

GIOVANNI MILAZZO – FOUNDER OF KANESIS

When companies came to us they asked, yeah, but, can you produce tonnes, dozens of tonnes per month? We replied yes, for sure, but we have a patent. Ah, you have a patent, they said, let us do it for you, we will take care of production, of everything. If we hadn't had that patent, a lot of the companies that contacted us would already be manufacturing today.

PAOLO MONDANI, OFF-SCREEN

Hemp bioplastic means green chemistry, a sector in which we are a world leader through the company Versalis—5200 workers, 12 plants, €5 billion of turnover. Here they make plastics and polymers and everything is being converted to green chemistry. With 300 patents, it has made us the envy of the world. But the owner, Eni, has decided to sell the company to the private investment firm SK Capital.

EMILIO MICELI – SECRETARY-GENERAL FILCTEM-CGIL

It seems rather strange that an investment firm registered in the Caymans can buy out the Italian chemicals industry.

PAOLO MONDANI, OFF-SCREEN

Not just the Caymans. SK Capital has most of its companies registered in the U.S. tax haven of Delaware, at this address in Wilmington, where 285,000 companies are domiciled. The investors behind SK Capital are anonymous. The investment firm is run by the Iranian engineer Barry Siadat, who manages \$1.5 billion, most of which is invested, and he wants to acquire a majority stake in Versalis for the same amount. Where will he get the money?

EMILIO MICELI – SECRETARY-GENERAL FILCTEM-CGIL

How will he acquire it? It always makes me think of the leveraged buyout of Telecom, through a takeover bid by Mr Colannino, which left the company with €34 billion of debt, from which it still hasn't recovered. Telecom was growing at 15 per cent; the Italian chemicals industry is not growing at 15 per cent per year. We still have €2.5 billion in debt.

PAOLO MONDANI, OFF-SCREEN

In 2011, it was Leonardo Maugeri, an Eni manager, who led the conversion from traditional to green chemistry.

LEONARDO MAUGERI – FORMER ENI MANAGER – HARVARD UNIVERSITY LECTURER

At the time when I was dealing with patents at Eni, we launched two major areas, one focused on renewables and the other on green chemistry. Even in a big company like that, for the culture that had developed over the years, developing patents was a cost. Not me, it was the general culture at Eni. If I look back at the presentations, the interviews given at the time or to Eni top management, I was always saying, patent, patent, patent! Because the number of patents we had was really negligible for such a big corporation like Eni.

PAOLO MONDANI, OFF-SCREEN

In Porto Torres, Versalis and Novamont manufacture one of their three hundred patents—the biodegradable plastic bag, or bioshopper, Best European Patent in 2007.

MASSIMILIANO MURETTI – FILCTEM-CGIL SARDINIA

This land belongs to Eni. It's all planted with thistles. It is part of the many hectares farmed here today, too few unfortunately...

PAOLO MONDANI

Thistles are used to make the polymer.

MASSIMILIANO MURETTI – FILCTEM-CGIL SARDINIA

Thistles produce the oil from which the monomer used to make the polymer is extracted, exactly.

PAOLO MONDANI

The polymer is then used...

MASSIMILIANO MURETTI – FILCTEM-CGIL SARDINIA

To make the bags, the bioshoppers. The bioshopper is an example, but not only.

GIOVANNI TAVERA – VERSALIS EMPLOYEE – UILTEC SASSARI

Before 2011, this plant had seven or eight production facilities. Production facilities mainly for Versalis, I mean. Ethylene, aromatics and polyethylene were produced, and before that phenol and cumene. Until Eni moved to close the chemical facilities and proposed the alternative of using them for green chemistry production, through a joint venture between Versalis and Novamont.

PAOLO MONDANI

How much has been invested so far?

MASSIMILIANO MURETTI – FILCTEM-CGIL SARDINIA

Around €200 million has been invested.

PAOLO MONDANI

How much more is need to complete it?

MASSIMILIANO MURETTI – FILCTEM-CGIL SARDINIA

€750 million in total, so another €500 million.

PAOLO MONDANI

What do you think of the fact that SK Capital, an American investment firm, has become a possible buyer?

GIOVANNI TAVERA – VERSALIS EMPLOYEE – UILTEC SASSARI

It has no industrial or economic value. It's a fund with 18 employees, mostly hired in 2015; it has no financial backbone; it has a share capital of 1.2 billion and we are asking it to invest 1.5 billion.

PAOLO MONDANI, OFF-SCREEN

After nine years at the helm of Eni, Paolo Scaroni today is advising the sale of Versalis to SK Capital.

MASSIMILIANO GADAU – VERSALIS EMPLOYEE – FEMCA-CISL

To see the old CEO now leading negotiations...

PAOLO MONDANI

Surprise!

MASSIMILIANO GADAU – VERSALIS EMPLOYEE – FEMCA-CISL

Yes, that certainly is a surprise.

PAOLO MONDANI

If you were a manager at Versalis today, with the accounts and debt that Versalis has, would you consider it a good idea to sell?

LEONARDO MAUGERI – FORMER ENI MANAGER – HARVARD UNIVERSITY LECTURER

If a foreign industrial entity comes along, there is the risk that the foreign industrial entity will take what's there, maybe because it's already in that business, and then go and rationalize the whole group, and what it will cut first is the assets it has bought in Italy. Let's just say it's one way to wipe out the competition, while taking their patents.

PAOLO MONDANI

Exactly.

LEONARDO MAUGERI – FORMER ENI MANAGER – HARVARD UNIVERSITY LECTURER

Whereas in Italy...

PAOLO MONDANI

They take the patents and leave the workers high and dry.

LEONARDO MAUGERI – FORMER ENI MANAGER – HARVARD UNIVERSITY LECTURER

Well...

PAOLO MONDANI

Isn't there the risk?

LEONARDO MAUGERI – FORMER ENI MANAGER – HARVARD UNIVERSITY LECTURER

That risk exists with everyone, with investment firms and industrial companies. What is important, rather, is if there were an Italian industrial company with a history behind it...

PAOLO MONDANI, OFF-SCREEN

While Italy's chemical patents are at stake, those who decide are in Munich. It is here that individual inventors and small and big businesses file for patents for 38 European countries. The European Patent Office, where 7000 engineers work, examines the applications and grants or denies the patent. It takes four or five years. The problem is how much it costs.

E.P.O. EXAMINER – MUNICH

Well, if we sum the cost of the translations, legal counsel and the procedure here, let's say it comes to around €50,000. To maintain the patent, to renew it every year, it costs a few thousand euros each year.

PAOLO MONDANI

Is favouritism shown towards big corporations who come here to file for patents?

E.P.O. EXAMINER – MUNICH

Not by the examiners, no. I have to admit we were rather perplexed by a recent management decision to move to a new office senior figures who will act as an interface for the bigger corporations.

ROBERTA ROMANO-GOETSCH – PRINCIPAL DIRECTOR, E.P.O.

But it's an offer available to any applicant and to any attorney.

PAOLO MONDANI

So I should not be sceptical and think there is a special fast lane for big corporations.

ROBERTA ROMANO-GOETSCH – PRINCIPAL DIRECTOR, E.P.O.

No. No.

PAOLO MONDANI

Because I was reading an internal document from 2015 which said that Canon, Philips, Microsoft, Qualcomm, BASF, Bayer, Samsung, Huawei, Siemens, Ericsson and Fujitsu would have a fast lane for their patent applications. What does that mean?

E.P.O. EXAMINER – MUNICH

On paper it's just dedicated assistance, but in practice it's not. They're the ones who bring us the real money and that's why they'll get special attention.

PAOLO MONDANI, OFF-SCREEN

Small inventors don't seem too enthusiastic about the European patent system. Sergio D'Offizzi is an engineer who at Enel and Sogin was responsible for safety at nuclear power plants.

SERGIO D'OFFIZZI – FORMER ENEL AND SOGIN MANAGER

Nuclear power plants, the current ones, are dangerous, those above ground I mean. The problem should be addressed at the root, by making them all underground. The real crux of the matter for the invention is not how to put the plant's reactor underground but also the storage areas for radioactive waste and turning the reactor room itself into a storage space for radioactive waste when the plant itself reaches the end of its operating life. If a crazy terrorist launches some missile, like they did in Bushehr, which as an expert for the Agency in Vienna I saw with my own eyes, what you have is what they call a "dirty bomb", which is not a real bomb in all effects, but it would provoke a radioactive cloud that, in the fallout, would force the inhabitants of

an entire region to stay well away for two hundred years. They can't do that through three hundred metres of rock.

PAOLO MONDANI

Listen, where did you file for your patent?

SERGIO D'OFFIZZI – FORMER ENEL AND SOGIN MANAGER

I filed my patent application in the United States and in China, where in 2014 it was granted, that was two years ago. Being European I also filed an application with the European Patent Office and after nine years I'm still waiting, not for a reply as such, but to know what has happened to my invention.

PAOLO MONDANI, OFF-SCREEN

Giorgio Marcon is a technical advisor to various courts and writes technical reports on road accidents.

PAOLO MONDANI

Can you explain how your invention, the reflexometer, works?

GIORGIO MARCON – COURT TECHNICAL ADVISOR

The reflexometer is simply a system that checks the psycho-physical condition of the driver. In practice, you respond quickly and regularly to a luminous visual signal on a mobile phone which, through...

PAOLO MONDANI

Or an iPad...

GIORGIO MARCON – COURT TECHNICAL ADVISOR

Or an iPad, which on the basis of my response tells me whether I'm in a condition to drive. At that moment...

PAOLO MONDANI

And when would a motorist do this sort of thing?

GIORGIO MARCON – COURT TECHNICAL ADVISOR

Before getting into the car, because the engine is off, but this system can even act as a car alarm against theft. Because since the constraint is not on me but on the vehicle, the engine can't start until I take the test.

PAOLO MONDANI

Whereas the steering wheel can also be connected to the reflexometer, right?

GIORGIO MARCON – COURT TECHNICAL ADVISOR

Yes.

PAOLO MONDANI

Even the steering wheel can be used, let's say, to protect the motorist.

GIORGIO MARCON – COURT TECHNICAL ADVISOR

That's right.

PAOLO MONDANI

How does it work?

GIORGIO MARCON – COURT TECHNICAL ADVISOR

Essentially, when you're driving, when you're relaxed at the wheel and start to get drowsy, at that moment your hands open slightly, because drowsiness has that effect on the driver, and that's when I get the signal as I'm driving that I'm practically falling asleep at the wheel.

PAOLO MONDANI

You mean the sensors on the steering wheel can definitely gauge tiredness.

GIORGIO MARCON – COURT TECHNICAL ADVISOR

That's right.

PAOLO MONDANI

When did you file your a patent on the reflexometer?

GIORGIO MARCON – COURT TECHNICAL ADVISOR

I started filing the documentation in 2013, but I started the paperwork three years earlier so I could plan all the documentation.

PAOLO MONDANI

And did you get your patent?

GIORGIO MARCON – COURT TECHNICAL ADVISOR

At the end of 2015.

PAOLO MONDANI

And why didn't you file at the E.P.O. in Munich?

GIORGIO MARCON – COURT TECHNICAL ADVISOR

Because I know they can cheat you during the patent application, rather than protect the patent.

PAOLO MONDANI

Cheat you? What kind of cheating do you suspect?

GIORGIO MARCON – COURT TECHNICAL ADVISOR

In practice they cheat you because information gets leaked or ends up in the hands of corporations that speculate.

PAOLO MONDANI

You received offers to develop the patent by private companies that then acted improperly, let's say.

GIORGIO MARCON – COURT TECHNICAL ADVISOR

Yes, I did. Yes, I did.

PAOLO MONDANI

What did they try to do?

GIORGIO MARCON – COURT TECHNICAL ADVISOR

They were trying to understand the ideas and know-how so as to patent it for themselves.

PAOLO MONDANI, OFF-SCREEN

Sergio Sulas invented a failsafe compass for navigators at sea.

PAOLO MONDANI

What's original about your invention?

SERGIO SULAS – BUSINESSMAN

There are various elements. First, there is the fact that the sensor, built in this way, has a high angular resolution, as much as a hundredth of a degree.

PAOLO MONDANI

Did you have it tested by anyone?

SERGIO SULAS – BUSINESSMAN

Yes, a prototype was tested by Giovanni Soldini and another prototype was tested on Luna Rossa.

PAOLO MONDANI

How much did it cost you?

SERGIO SULAS – BUSINESSMAN

Let's say around €100,000.

PAOLO MONDANI

Have you managed to market it in a major way?

SERGIO SULAS – BUSINESSMAN

No. No.

PAOLO MONDANI

How come?

SERGIO SULAS – BUSINESSMAN

Because to market it in a major way you have to have a business plan with major financing to start with.

PAOLO MONDANI

Which nobody...

SERGIO SULAS – BUSINESSMAN

Exactly.

PAOLO MONDANI

And which you didn't have...

SERGIO SULAS – BUSINESSMAN

Which I didn't have, so...

PAOLO MONDANI

You couldn't find a big partner.

SERGIO SULAS – BUSINESSMAN

Exactly.

PAOLO MONDANI

Where did you file your patent? At the E.P.O. in Munich?

SERGIO SULAS – BUSINESSMAN

Yes. Then I filed for patents in ten countries in Europe, the United States, Australia and New Zealand.

In my experience I found that in the United States it's harder to get a patent but easier to have a small business. And then there's a whole series of facilitations that the European system doesn't offer.

PAOLO MONDANI

For instance?

SERGIO SULAS – BUSINESSMAN

It costs 15 to 20 times less.

MILENA GABANELLI, IN STUDIO

Even in Italy we have a Patents Office, where only people interested in an Italian patent go. It takes at most two and half, three years, depending on the complexity of the invention, and costs around €5000, plus an extra every year to maintain it. Whereas if you go directly to the E.P.O. in Munich it can take a little bit longer but the cost for the application and a grant covering a packet of countries for a few years comes to around €50,000. Is it a lot? Is it a little? It depends on the success of the invention. But even once you have a patent in hand you are not necessarily safe, because often a big corporation will come along and say you have copied a part of your idea from them. And even if it isn't true, they'll drag you into a long and expensive legal battle where, if you are big, you can send in an army of lawyers, but if you are small, you end up negotiating royalties on some future development or just sell them the patent outright, maybe at the price they tell you, and that's the end of the story. Now for a commercial break and then we'll be going back to the E.P.O. in Munich where, according to those who work there, they have as much of a say in matters as they do in North Korea.

COMMERCIAL BREAK

MILENA GABANELLI, IN STUDIO

We're back. We're talking about patents and we're going to see: the battle between a man who claims he invented the Tutor system and Autostrade that claims it was actually Galileo; how universities are incubators of ideas and how Marco Carrai, advisor to the prime minister, is using those of La Sapienza, Rome; and then the more complicated issue of pharmaceuticals—where do you draw the line between the need to save human lives and the need to recover research costs and make a profit? Well then. First let's go back to the E.P.O. in Munich, where filing a patent is too expensive, as everyone says, but where inside the glass tower nothing is transparent.

PAOLO MONDANI

The E.P.O. isn't controlled by the European Union, you are, in fact, extraterritorial, with special immunities. So who is it that controls you?

E.P.O. EXAMINER – MUNICH

In theory, all the states should, through their representatives on the Administrative Council, but what usually happens is they come to an arrangement with Battistelli on specific issues—one favour in return for another. It's a bit like what was happening at FIFA under Blatter.

PAOLO MONDANI, OFF-SCREEN

Outside the Munich office, even the employees say that the President, Benoît Battistelli, manages the E.P.O. obscurely.

ELIZABETH HARDON – TRADE UNIONIST, E.P.O.

A month ago, Jon and I were fired and Malika was demoted. We had called for greater transparency and checks on E.P.O. finances. That's why the President took aim at us.

PAOLO MONDANI

Corruption, here at the E.P.O.?

E.P.O. EXAMINER – MUNICH

If you mean €10,000 in a closed envelope, then no. But, you know, exchanging favours can also mean a promotion, or keeping a position of command. This is promised to a manager and in return he can expedite a patent application.

PAOLO MONDANI

The E.P.O. has a turnover of €2 billion a year. What do you do with all that money?

E.P.O. EXAMINER – MUNICH

It isn't clear how the money is used. We don't even know how much the President earns.

ELIZABETH HARDON – TRADE UNIONIST, E.P.O.

Today we are opposed to the President's reforms because they violate freedom of association, freedom of speech and our privacy. We will continue our protest until the office starts serving the citizens of Europe again, rather than the career of some megalomaniac manager.

E.P.O. EXAMINER – MUNICH

Just think, we need to request permission to go on strike or discuss things amongst ourselves. And if the President says no, then we can't do it.

PAOLO MONDANI, OFF-SCREEN

Mauro Masi has been a member of the E.P.O.'s Administrative Council since 2006. What does he think of the President Battistelli's methods?

MAURO MASI – ITALIAN REPRESENTATIVE, E.P.O. ADMINISTRATIVE COUNCIL

Battistelli acts properly, he respects all the formal rules of the E.P.O. The issue is whether those rules are still valid or whether they should be changed. In my opinion they should be changed.

E.P.O. EXAMINER – MUNICH

They've had articles written in the papers that make us look like spoilt engineers who earn €8000 a month and still have the hide to demand the right to strike.

PAOLO MONDANI

€8000 sounds like quite a lot to me.

E.P.O. EXAMINER – MUNICH

Sure, but our work is of the highest quality and we're also paid so as not to be corruptible.

PAOLO MONDANI

The E.P.O. doesn't answer to Europe; it's not part of the European Union. It's a private organisation—you even have immunity. So who is it that controls you?

ROBERTA ROMANO-GOETSCH – PRINCIPAL DIRECTOR, E.P.O.

Our Administrative Council, our lawmaker, let's say, which is made up of representatives of the member states. So they are our Administrative Council and we have a Commissioner, a Commissioner of the European Union, who is an observer inside the Administrative Council.

PAOLO MONDANI

So there is no supranational body independent of the Administrative Council that exercises oversight over your work?

ROBERTA ROMANO-GOETSCH – PRINCIPAL DIRECTOR, E.P.O.

No.

PAOLO MONDANI, OFF-SCREEN

The European Patent Office in Munich is an anomaly, and as such it will manage the unitary European patent. Where only English, German and French are spoken.

RENATA RIGHETTI – PRESIDENT, BUGNION – INDUSTRIAL PROPERTY CONSULTANTS

The unitary patent is an intellectual property title that covers all 28 countries in the European Union. It was desired to achieve uniformity across all of Europe. The various states progressively joined in. Initially, Italy and Spain opted out, now it's only Spain that's out. The unitary patent can't come into force, however, until the Unified Patent Court is established—a Unified Patent Court that will have jurisdiction over all disputes and issues over counterfeiting and the like with regard to the unitary patent and the European patent in general.

PAOLO MONDANI

The unitary European patent—five offices: Munich, Berlin, The Hague, Brussels and Vienna. Three languages: German, French and English. Three venues for the Unified Patent Court: Paris, London and Munich, with an appeals court in Luxembourg. It seems they only come to Italy on holidays.

MAURO MASI – ITALIAN REPRESENTATIVE, E.P.O. ADMINISTRATIVE COUNCIL

These decisions are ratified by the individual parliaments, so they are really about high politics, with a capital P. You need to go and speak to the political institutions.

PAOLO MONDANI, OFF-SCREEN

The unitary patent was approved by a majority by Parliament in 2015, voted by the parties making up Renzi's coalition government. With the new patent, small and medium enterprises will have fewer expenses, but won't it be the big corporations that benefit most?

RENATA RIGHETTI – PRESIDENT, BUGNION – INDUSTRIAL PROPERTY CONSULTANTS

Yes, well... I think it's fair to suspect that. It's fair because to exercise your patent rights at the Unified Patent Court, presumably it will be much more expensive than it is today.

PAOLO MONDANI, OFF-SCREEN

Litigation over the intellectual property rights of a patent costs between €200,000 and €400,000 in Italy. For small inventors, that's a heavy burden to face. But not for Romolo Donnini, who driving along the motorway to Florence one day came up with an idea.

ROMOLO DONNINI – OWNER, CRAFT SRL

We were driving a van, at fairly high speed, but within the speed limit, when at a certain point a car overtook us really fast, then hit the brakes as it passed a speed camera, and then took off again at the same speed as before. That's when something clicked in me and I had a flash that made me think of how you could monitor not just a single point but an entire stretch of road.

PAOLO MONDANI, OFF-SCREEN

The system measures the average speed of a vehicle over a stretch of road between two measurement points that are several kilometres away. Romolo Donnini filed his patent in Italy in 1999, and soon after with the E.P.O. in Munich.

ROMOLO DONNINI – OWNER, CRAFT SRL

As I was really enthusiastic about the idea and firmly convinced of the success it would have, I went to Autostrade to propose it to them.

PAOLO MONDANI

And what did they say?

ROMOLO DONNINI – OWNER, CRAFT SRL

Ah well, we talked a bit and then nothing, complete disinterest, until 2004 when in the media Autostrade and the traffic police announced they had invented and patented a system for monitoring average speed. To make it short, at a certain point, before releasing the system, they asked me to make them an offer in cash. Which I did, after speaking to experts, because I wasn't able to value it, and we asked them for €1.5 million.

PAOLO MONDANI

And them?

ROMOLO DONNINI – OWNER, CRAFT SRL

And they offered me one hundred and fifty thousand—€150,000. As we couldn't reach an agreement, in 2006 I sued them, a lawsuit that lasted about ten years, until 4th November, 2015 when the supreme court ruled in our favour.

PAOLO MONDANI

The company Craft, owned by Romolo Donnini, accused Autostrade of counterfeiting its patent for the measurement of average speed—the Sicve Tutor system.

GIUSEPPE BERNARDI – COUNSEL FOR AUTOSTRAD

The Craft patent is based on the physical concept of space-time to obtain a formula for average speed. The concept was identified around four centuries ago by Galileo, for which the Craft patent does not actually contain anything new. The Autostrade Tutor system is based on the same concept of space-time and Autostrade decided not to patent it. So where is the infringement?

PAOLO MONDANI

The supreme court says Donnini's patent is entirely valid.

GIUSEPPE BERNARDI – COUNSEL FOR AUTOSTRAD

Sure, that's what the supreme court says, but the supreme court also says there is absolutely no infringement.

PAOLO MONDANI, OFF-SCREEN

In reality, the supreme court says there is infringement and referred the case to the Rome court of appeals to decide in merit. In the meantime, Donnini's partner has also sued Autostrade, accusing it of copying the software for the Tutor system that he produced.

ALESSANDRO PATANÈ – OWNER, MPA GROUP

Autostrade, in all this time, has not managed to demonstrate that it has a tender contract that transfers the intellectual property of the software that we provided in 2004.

GIUSEPPE BERNARDI – COUNSEL FOR AUTOSTRAD

What is absolutely certain is that in the 2004 contract, let me repeat, it is specified that the industrial and intellectual property of the software belongs to Autostrade.

PAOLO MONDANI

They claim they have the contract though.

ALESSANDRO PATANÈ – OWNER, MPA GROUP

Look, the piece of paper that they claim to have and which they insistently produce in the court cases underway is none other than a document that simulates a tender contract.

PAOLO MONDANI, OFF-SCREEN

The idea of the Tutor system came by chance, just like cellulose, penicillin, Post-It notes and chewing gum. But if we want to file more patents we're better off turning to our universities.

LEONARDO MAUGERI – FORMER ENI MANAGER – HARVARD UNIVERSITY LECTURER

When I started my time at Eni in this sector, I realized that many universities didn't even have patent offices. Those that did have a patent office didn't have the slightest idea of how to exploit the patents. I believe the situation still persists today.

PAOLO MONDANI

Why don't universities do it, why don't they do like the Germans and the Americans?

LEONARDO MAUGERI – FORMER ENI MANAGER – HARVARD UNIVERSITY LECTURER

Because in Italy, the idea that intellectual property is of value does not exist.

PAOLO MONDANI, OFF-SCREEN

At La Sapienza, Rome, what's valued is political friendship. The University of Rome has made a contract with the company K-Cube, which will be able to view the university's patents and market them. If the patent is successful, La Sapienza will earn a fixed income of 1.3 per cent.

PAOLO MONDANI

Doesn't it seem a bit low to you?

TEODORO VALENTE – PRO-RECTOR, LA SAPIENZA UNIVERSITY OF ROME

I said no.

PAOLO MONDANI

It's a fact that K-Cube is run by Marco Carrai, the prime minister's right-hand man, one of the members of the Board of Directors is Alberto Bianchi, Enel director and chairman of Fondazione Open, which belongs to Matteo Renzi, and K-Cube was only created in 2014, so it has zero experience. What made you do it?

TEODORO VALENTE – PRO-RECTOR, LA SAPIENZA UNIVERSITY OF ROME

It is an opportunity that we intend to offer to our researchers. We will evaluate whether the opportunity...

PAOLO MONDANI

It seems to me the opportunity is all K-Cube's...

TEODORO VALENTE – PRO-RECTOR, LA SAPIENZA UNIVERSITY OF ROME

I don't believe so. Why do you say that?

PAOLO MONDANI

It's brand new on the market, it's true that there are many of the prime minister's friends, but they get the entire portfolio of patents of La Sapienza.

TEODORO VALENTE – PRO-RECTOR, LA SAPIENZA UNIVERSITY OF ROME

I repeat, they don't get the entire portfolio of patents of La Sapienza.

PAOLO MONDANI

Yes they do, don't they?...

TEODORO VALENTE – PRO-RECTOR, LA SAPIENZA UNIVERSITY OF ROME

They have no exclusive rights; they make La Sapienza an offer for the exploitation of a patent and La Sapienza can decide whether to accept or decline.

PAOLO MONDANI

How did you choose K-Cube? Was there a competition, a call for tenders or the like?

TEODORO VALENTE – PRO-RECTOR, LA SAPIENZA UNIVERSITY OF ROME

No, no. There was no call for tenders. We received a collaboration proposal directly from them and we studied, together let me say, the ways an agreement could be reached.

PAOLO MONDANI, OFF-SCREEN

At the Polytechnic of Milan, things work differently. Here it is the university that patents the inventions of its researchers and then gives them to its spin-offs or licenses them to private companies.

UMBERTO SPAGNOLINI – LECTURER IN COMMUNICATION SYSTEMS, POLYTECHNIC OF MILAN

This new approach has the advantage that the maturity process occurs within the university. This produces profit, if you like, because it creates greater profits. These greater profits can then be used to invest in new research activities.

FERRUCCIO RESTA – LECTURER, POLYTECHNIC OF MILAN

The Polytechnic of Milan has a portfolio of around 1200 patents, at present, of which half come from independent research, which is self-financed, and half come from collaboration projects with industry. After the CNR, we are the research institution that files the most patents in the country.

PAOLO MONDANI

These days even universities file patents. But in your book you write that patents and innovation no longer go hand in hand. Why?

ANDREA CAPOCCI – PHYSICIST – AUTHOR OF “IL BREVETTO” (EDIESSE)

Because today, a scientist who wants to use a technique developed by somebody else first has to check that there is no patent stopping him from doing so or royalties to pay.

PAOLO MONDANI, OFF-SCREEN

Europe’s biggest research centre, CERN in Geneva, invented the World Wide Web and made it available to everyone, without patenting it.

ANDREA CAPOCCI – PHYSICIST – AUTHOR OF “IL BREVETTO” (EDIESSE)

CERN produces discoveries, technological innovation and software outside the intellectual property system, that is, it distributes it all externally without using patents or copyright on software.

PAOLO MONDANI, OFF-SCREEN

Let’s take the case of pharmaceuticals. When patents are locked up for years on end, a huge network of counterfeit drugs develops across the underground web, which can be accessed using software that hides the tracks of the cash transactions. The OECD estimates that the counterfeit drug business is worth \$200 billion per year. But what kind of drugs are we talking about?

ROBERTO DE VITA – CRIMINAL LAWYER – EURISPES IT SECURITY OBSERVATORY

Drugs that contain impurities, sometimes bacteria, sometimes toxins. Drugs that are produced using other substances, besides the active principles, which are not considered safe. Drugs that contain incorrect quantities of the active principle or drugs that completely lack the active principle.

PAOLO MONDANI, OFF-SCREEN

Anti-cancer drugs and drugs for hepatitis C cost too much and are protected by monolithic patents. That's why on-line pharmacies are so popular. The business is in the hands of criminal organizations, but is tolerated by countries such as India, China, Russia and Brazil. The market today is more profitable than narcotics.

ROBERTO DE VITA – CRIMINAL LAWYER – EURISPES IT SECURITY OBSERVATORY

The ratio, as estimated by Interpol and studies by The Economist, is, in the lowest of cases, one to ten, as in the case of counterfeit drugs and heroin, and compared to cocaine, for every thousand euros invested in cocaine, some antiretroviral and anti-cancer drugs have a value of as much as two hundred times more.

PAOLO MONDANI

What are the consequences of taking counterfeit drugs?

ROBERTO DE VITA – CRIMINAL LAWYER – EURISPES IT SECURITY OBSERVATORY

Interpol estimates that one million people die a year as the worst consequence of taking counterfeit drugs. Without considering the extraordinary, and often incalculable, harm caused in the short and long term.

PAOLO MONDANI

Why is the counterfeiting of pharmaceuticals growing?

ANDREA CAPOCCI – PHYSICIST – AUTHOR OF "IL BREVETTO" (EDIESSE)

Because in recent decades, manufacturing drugs outside the reach of patents has become increasingly harder. Remember that, until the 1970s and 1980s, advanced countries such as Italy, France and even Germany did not recognise patents on drugs. This allowed Europe, for example, to develop a strong pharmaceuticals industry. Italy in particular, through the manufacture of generic medicines, was the world's fifth biggest manufacturer of drugs in the 1980s. Which made us something of a power in the pharmaceuticals sector. In the 1980s and especially in the 1990s, international market rules became much more restrictive in all sectors, but especially, and above all, in the pharmaceuticals market. Patents on drugs were imposed in all countries that are members of the World Trade Organization.

PAOLO MONDANI, OFF-SCREEN

Big Pharma defends its patents tooth and nail, for instance by delaying the release of generic drugs by not permitting their authorisation until the patent on the original drug expires. In Italy there is even a law that requires it, yet for the European Union it is illegal. Cabinet has discussed repealing the law, but there is always somebody who saves it. The Chairman of the Antitrust Authority, Pitruzzella, has instead called for it to be abolished.

GIOVANNI PITRUZZELLA – CHAIRMAN, ANTITRUST AUTHORITY

If Parliament introduced the law, we would consider it a good thing. Not only us, but also the European Commission, which has always called for this type of action.

PAOLO MONDANI, OFF-SCREEN

Some 200 million people around the world have hepatitis C. Philadelphia is the birthplace of the drug that is fighting it and which has already posted record profits in the pharmaceuticals sector. Its inventor lives here; his mother and father were Italian.

MICHAEL J. SOFIA – CSO ARBUTUS BIOPHARMA

I am the son of a barber from Palermo and I grew up in Baltimore. My father taught me the old immigrant ethic of work hard and do something good with your life. When I finished studying, I turned to my talents and my passion: discovering new drugs.

PAOLO MONDANI

When did you start working on Sofosbuvir, the active principle that would then be used to create the drug Sovaldi?

MICHAEL J. SOFIA – CSO ARBUTUS BIOPHARMA

The idea emerged in 2006, when I thought of a drug to modify how the hepatitis C virus works. The patent was filed in 2011 and finally approved in 2013.

PAOLO MONDANI, OFF-SCREEN

Among the first in Italy to use the drug invented by Michael Sophia was a patient in Pavia.

PAOLO MONDANI

When did you start seeing an improvement?

PATIENT

To be honest, immediately.

PAOLO MONDANI

What do you mean by immediately?

PATIENT

After or in the second week, I already felt more invigorated, more... Different somehow.

PAOLO MONDANI

How many tablets do you have to take, in all?

PATIENT

Around sixty tablets.

PAOLO MONDANI

And the cost of the entire cycle?

PATIENT

The entire cycle costs €60,000.

PAOLO MONDANI

So, sixty tablets, sixty thousand euros. One thousand per tablet.

PATIENT

More or less.

PAOLO MONDANI

Would you have been able to pay for it?

PATIENT

Not at all. Not at all.

PAOLO MONDANI, OFF-SCREEN

Until a year ago, people died not of hepatitis C but of its consequences—cirrhosis of the liver and liver cancer. Then Sofosbuvir-Sovaldi came along.

RENATO MASERATI – “SAN MATTEO” INFECTIVE DISEASES CLINIC, PAVIA

It ensures full recovery from the virus, which means it eliminates the virus from the patient’s body in more than, or close to 95 per cent of the cases treated.

PAOLO MONDANI, OFF-SCREEN

Sofosbuvir-Sovaldi is manufactured by the American company Gilead, which is registered in the tax haven of Delaware, at the same old address in Wilmington. Two years ago the drug cost Italy €60,000 per patient; today it costs €15,000.

PAOLO MONDANI

How much does it cost in Germany?

LUCA PANI – GENERAL MANAGER, AIFA

It costs around three times what we pay for it.

PAOLO MONDANI

You mean €45,000?

LUCA PANI – GENERAL MANAGER, AIFA

That’s right.

PAOLO MONDANI

And in France?

LUCA PANI – GENERAL MANAGER, AIFA

Around €30,000, approximately. Spain closed the deal at €27,000, Portugal more or less the same.

PAOLO MONDANI, OFF-SCREEN

The high prices are justified by the exorbitant cost of the drug, says Gilead. But Michael Sofia remembers very well how much it cost.

MICHAEL J. SOFIA – CSO ARBUTUS BIOPHARMA

Considering all aspects, from research to development... bringing Sofosbuvir out onto the market cost around \$1 billion.

PAOLO MONDANI, OFF-SCREEN

One billion dollars plus another 11 billion paid by Gilead to buy out the small business that discovered it comes to \$12 billion in costs. In two years, Gilead has earned \$40 billion.

PAOLO MONDANI

They must be satisfied, don't you think?

LUCA PANI – GENERAL MANAGER, AIFA

Very satisfied I would say. There has been nothing like it in the history of pharmaceuticals.

PAOLO MONDANI

If I understood correctly, Italy so far has spent €750 million.

LUCA PANI – GENERAL MANAGER, AIFA

Correct. Exactly €750 million for 50 thousand patients by June this year, 2016.

PAOLO MONDANI

So the contract expires in June.

LUCA PANI – GENERAL MANAGER, AIFA

Correct.

PAOLO MONDANI

And what will you do?

LUCA PANI – GENERAL MANAGER, AIFA

The contract will be renegotiated.

PAOLO MONDANI

Can't we manage, in your opinion, to drastically reduce that €15,000?

LUCA PANI – GENERAL MANAGER, AIFA

We will negotiate the price down drastically, also because in the meantime new molecules have come out.

PAOLO MONDANI, OFF-SCREEN

In Italy there are one million patients with hepatitis C. At the current price of Sovaldi, it would cost €15 billion to cure them. But the government has earmarked just one million for the most serious cases. The others have to wait to get worse or buy it without price controls. If we cut the railways, tunnels and motorways we could give the drug to everyone. Or...

PAOLO MONDANI

Can't we manufacture the drug ourselves?

LUCA PANI – GENERAL MANAGER, AIFA

The fact is that we abide by the rules of the Patent Cooperation Treaty, or the World Intellectual Patent Organisation, call it what you like. In short, the process by which intellectual property is protected.

PAOLO MONDANI, OFF-SCREEN

However, protecting a patent can conflict with the health of people. That's why at the San Matteo Polyclinic they immediately publish their discoveries and do not patent them. As in the case of new microscope filters for operations on brain tumours.

DANIELE BONGETTA – NEUROSURGEON, "SAN MATTEO" POLYCLINIC – PAVIA

The filter system was developed at a cost of less than €50, while new instruments cost €200,000.

PAOLO MONDANI

Are these the filters?

DANIELE BONGETTA – NEUROSURGEON, “SAN MATTEO” POLYCLINIC – PAVIA

These are the filters, which have been modified to be inserted into the eyepiece of our microscopes, not new microscope which can cost up to €200,000.

PAOLO MONDANI, OFF-SCREEN

Even the virologists at San Matteo choose not to patent their discoveries.

FAUSTO BALDANTI – PROF. MOLECULAR VIROLOGY, “SAN MATTEO” POLYCLINIC – PAVIA

We have discovered a series of new respiratory viruses in recent years, which have been codified in the taxonomy. Because these diagnostic, or investigative approaches, that is research applied to clinical practice, enable us to discover what is missing, what was always there but without us knowing.

PAOLO MONDANI

So new diagnostic methods for new viruses. Why haven't you patented them?

FAUSTO BALDANTI – PROF. MOLECULAR VIROLOGY, “SAN MATTEO” POLYCLINIC – PAVIA

For us it's important that scientific research has an immediate effect on the health of patients. Because if you go down the patent road, for a long time you have to maintain complete secrecy until the application process is complete, and so...

PAOLO MONDANI

In the meantime people are dying.

FAUSTO BALDANTI – PROF. MOLECULAR VIROLOGY, “SAN MATTEO” POLYCLINIC – PAVIA

In the meantime there is the disease.

MILENA GABANELLI, IN STUDIO

Patents generally last 20 years, especially in the pharmaceuticals sector. Then the generic medicines usually come along, which cost much less. So what do you do so as not to lose market share? You tinker with something, change the name and file for a new patent. This also happens with other products. It's the case of the most widespread herbicide in the world, glyphosate, sold under the name Roundup by the agrochemical multinational Monsanto. When the patent expired, to maintain its effective monopoly, it modified this and that and now it's called Roundup Platinum—almost sounds like the name of a razorblade. That's one thing. Then there are products that need to be monitored over time because they can harm the environment or our health, so every few years they have to be re-authorized. This is what happens in Europe and it's the case of glyphosate, the patent of which expires in June. Now the International Agency for Research on Cancer has classified it as a “probable carcinogen”. This week the decision on whether to reauthorize the substance or ban it will be taken by the European Commission. Lined up against it, that is, those in favour of banning it, are the Netherlands, France and our own Health, Environment and Agricultural Policy ministers. Whether it is the principle of

precaution, as we hope, or the Monsanto lobby that wins out, we will know very shortly.