

THE INTERNET OF THINGS: the next industrial revolution?

With the rapid rate of change in the communications sector and the extensive development of the Internet of Things, some believe we are in the middle of a new industrial revolution. There are plenty of legal and regulatory questions, but few definitive answers. **JULIE MCCROSSIN** speaks to Australian Competition and Consumer Commission (ACCC) commissioner Cristina Cifuentes about the strategic questions lawyers need to be asking during this time of change, what prepared her for her role as commissioner, and how intellectual curiosity – a talent she learnt from her Spanish immigrant parents – has underpinned her “zigzag” career.

When Cristina Cifuentes speaks, you want to listen. She speaks with gentle enthusiasm, quiet authority and charming warmth. She also asks questions and listens closely. Most importantly, she speaks from a depth and breadth of professional and life experience. During our conversation in her office at the ACCC, high up in the Sydney CBD skyline, she illustrates her observations with examples from across the economic and social spectrum of the Australian community.

The scope of the ACCC’s work is remarkable. Its primary responsibility is to ensure individuals and businesses comply with Australia’s competition, fair trading and consumer protection laws, in particular the *Competition and Consumer Act 2010 (Cth)*. It also promotes fair trade and competition in markets to benefit consumers,

businesses and the community, and regulates national infrastructure services. Cifuentes is one of seven ACCC commissioners. They meet every week with chairman Rod Sims and make decisions on a range of matters. Some commissioners also chair specific committees. Cifuentes chairs the ACCC’s telecommunications, infrastructure and audit committees. She is also a member of its corporate governance board.

Outside the ACCC, she is involved in several mentoring groups and her church’s financial committee and is a member of the Faculty of Law’s advisory board at the University of Technology Sydney (UTS). She is also an Australian Energy Regulator board member, the Australian delegate to the OECD Network of Economic Regulators and chair of the Utility Regulators Forum.

Cifuentes loves the breadth of her role at the ACCC and the opportunity to make a difference in public policy and social equity.

“The Commission is the decision maker in a range of areas, from policy input to regulatory decisions to enforcement actions, and the commissioners are the ones who make decisions about mergers and acquisitions,” she says.

“For example, should we allow a particular acquisition to go ahead, or should we authorise particular conduct which might otherwise be anti-competitive?”

“I really like the challenge of being thrown into a new area and getting across all the issues, such as telecommunications. It has been fantastic.”

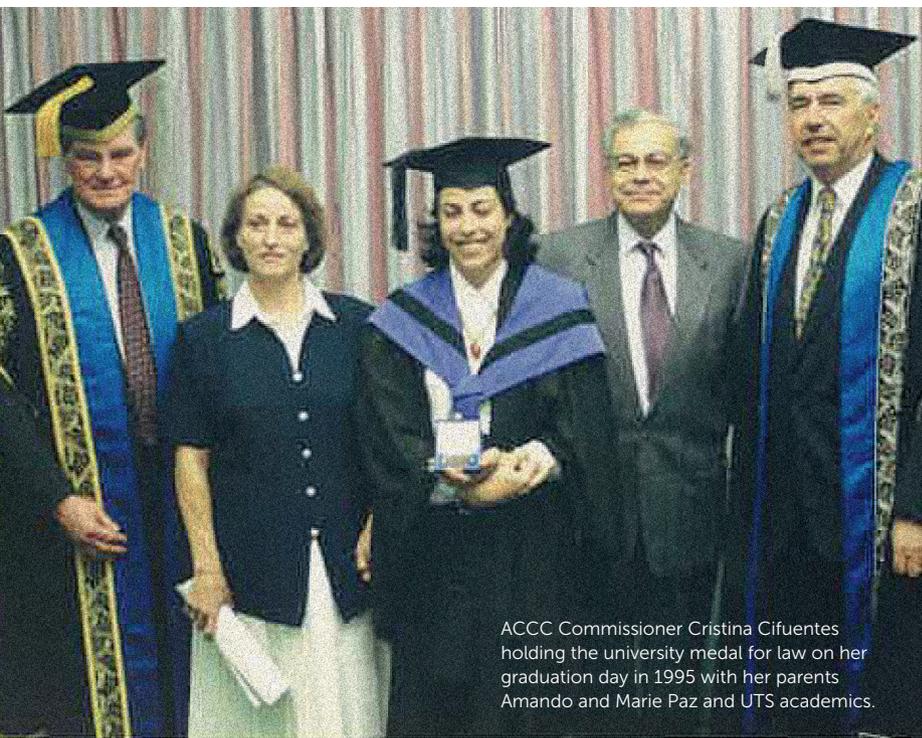
For Cifuentes, intellectual curiosity is at the heart of what she does.

“I love public policy,” she says. “It’s like a Rubik’s cube, where you try and get as many of the factors to line up. That is the challenge.”

The daughter of Spanish immigrants, Cifuentes was born in Spain and moved to Australia with her family in 1964.



PHOTOGRAPHY: JASON MCCORMACK



ACCC Commissioner Cristina Cifuentes holding the university medal for law on her graduation day in 1995 with her parents Amando and Marie Paz and UTS academics.

She credits her parents with nurturing her intellectual curiosity as a child and instilling in her a strong commitment to social equity.

“My mother, perhaps unusually for women of her background and generation, insisted that my sister and I would have the same opportunities as my brothers,” she says. “We were all encouraged to be professionals and to give back to the community as well.

“My father was an accountant, but in those days, as now, it was very hard to get your experience in another country recognised. He found that very difficult. I think that helped form my views on the importance of education and creating opportunities.”

Cifuentes clearly admires her parents. Her mother, Marie Paz, is 82 and still “intellectually demanding”. Her father, Amando, has passed away, but remains a major influence.

“He was a great one for debating the economics and politics of what was going on in the outside world,” she says.

“He encouraged all of us to be curious. Eventually, he ended up running a business as a franchisee with my mother. He was his own boss, but with really long working hours. I

“The Internet of Things is the act of sending data and receiving data. Whenever you use any of these apps, it will be sending some information about you, such as your preferences, where you are, your connections and how you basically live your life.”

worked at telephone betting while I put myself through university.”

Cifuentes says her path to becoming a commissioner was anything but linear. “You don’t start as a junior and gradually work your way up to become a commissioner,” she says. “You move sideways.

“I started off as an economist at the Reserve Bank and NSW Treasury after graduating from the University of Sydney. Then I did my law degree at UTS and moved into law reform. In the meantime, I’d also gone into financial markets and started sitting on boards.”

She believes this breadth of experience has made her better able to manage the diverse work ACCC commissioners undertake. “I’ve worked in policy reform, superannuation, investments, financial markets, public and private boards,” she says. “I know what it’s like to be a regulated business as well as the regulator.”

The Internet of Things

With this experience, both professionally and in life, how would Cifuentes explain the meaning and significance of the Internet of Things?

“I would describe the Internet of Things as a giant network where virtually anything you are capable of sending data to, or receiving data from, is connected to the internet,” she says.

“It is like an enormous, complex spider web where all your devices are connected to the internet and it becomes interactive.”

Asked whether we are experiencing a new industrial revolution, Cifuentes explains: “As an economist, I’d say it is probably not the same magnitude as the industrial revolution. The industrial revolution had a significant impact in terms of economics and the generation of wealth. It was a major game changer that had social, political and economic consequences.”

However, Cifuentes believes the Internet of Things will have wide-reaching consequences.

“When you combine it with what is happening in communications generally, I think it has the capacity to accelerate what we are already seeing in terms of becoming an information technology-based economy,” she says. “It has the potential to change the way we communicate across a whole range of areas.”

So, what questions should strategic leaders in

the legal sector be asking themselves and their clients right now?

Cifuentes says law firms should pay more attention to how clients' business models are changing, and the implications for legal compliance.

"In this sense, it is like the industrial revolution," she says. "The business models are changing fundamentally. We are seeing a lot more platform businesses, like eBay and Google. They are operating across geographical and legislative boundaries. This is different from multinationals of the past, which tended to have their businesses geographically located. A lot of businesses are using technologies where they are not actually located anywhere."

These new business models are creating challenges for lawyers and regulators.

"It is something that conceptually we are still grappling with," she says. "Regulators around the world are looking at it, as is the ACCC. And the legal industry needs to take a look at how their clients' businesses are changing and what that may mean for compliance with the law."

By its nature, Cifuentes says, regulation lags behind innovation. However, the ACCC is responsible for determining whether the regulatory framework is in need of change.

"This is why the ACCC has just done the market study on telecommunications and communications, which we are soon to release as a draft report, to see whether the regulatory framework is appropriate given the massive changes we've seen, or whether we need to make changes," she explains. The ACCC has conducted a wide-ranging consultation process as part of the study. The final report on the communications sector market study is due in early 2018.

She says the issue of data ownership is another challenging legal question.

"As we move to the Internet of Things and a greater use of technology, it generates an enormous amount of data," she says. "The Internet of Things is the

act of sending data and receiving data. Whenever you use any of these apps, it will be sending some information about you – your preferences, where you are, your connections and how you basically live your life."

Recognising the value of this data, many service providers are asking customers for access. "They will say it is anonymous and de-identified," explains Cifuentes. "But it is a valuable commodity because they will put it together and either sell it or use it."

The focus here is not on privacy but on data as an economic commodity, which is something Cifuentes believes is not getting enough attention.

"The question is: who owns this data? And the answers aren't always clear," she says. "For example, in energy, who should own the data that your meter generates, such as how much energy you use and if you are on time-of-use?"

For Cifuentes, there is another interesting question: "Can consumers control their data and are they able to commoditise it themselves?"

Cifuentes' parents were clearly successful in nurturing her intellectual curiosity. So, are her children carrying on the family tradition? The answer is yes. Her daughter is studying economics and law at UTS, while her son is completing school and interested in industrial psychology and behavioural economics. Cifuentes says philosophical debates are a common part of family life. Cifuentes attended a public school, Riverside Girls High School in Gladesville, and is mindful of the fact her children have lived a more privileged childhood than her own. She has tried to extend their life experience and encourage questions about different ways of life through travel.

Cifuentes says she is blessed with her children, who are motivated by social justice. "They ask questions. We have debates. And my mother is constantly at them as well. It's become a bit of a family thing," she notes, laughing warmly. **LSJ**



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