



Pope Francis delivers a special Urbi et Orbi blessing to the world praying for an end to the coronavirus pandemic

COVID-19 CREATES A UNIQUE KAIROS MOMENT FOR FUCE

As we search our way through this first phase of the COVID-19 pandemic, FUCE members have been presented with a 'Kairos moment' – a pivotal time in the social and economic history of the world. The closure of the economy to save the most vulnerable has strengthened the meaning of community, citizenship and communion. We are learning once again what we previously cherished; that every person counts.

We've rediscovered how our choices and sacrifices can privilege the common good. There is a newly shared awareness that we are all in each other's hands, interdependent, woven together. As Pope Francis reflected in his special *Urbi et Orbi* – delivered globally from a deserted St. Peter's Square;

"this pandemic has exposed our vulnerability and uncovers those false and superfluous certainties around which we have constructed our daily schedules, our projects, our habits and priorities.... uncovering once more that (blessed) common belonging, of which we cannot be deprived: our belonging as brothers and sisters."

The heroic generosity and sacrifices made by frontline workers and many other previously anonymous people has led to a re-evaluation of the nobility of service.

Continues on page 2



Stormy waters

As educationalists, FUCE members - like so much else of society - were plunged into uncharted waters with the arrival of the coronavirus. Almost overnight, our institutions had to pivot from traditional face-to-face pedagogy to remote teaching, learning and assessment. By all accounts, most institutions adapted well to the crisis circumstances.

However, even greater challenges lie ahead. Around the world, education is reinventing itself. The experience of university education is being transformed into a dramatically different model and it's happening faster than any of us could have predicted. As leaders, we need to respond honestly and creatively to these challenges and to do so without delay.

A major concern is that remote learning tools disproportionately benefit larger, richer and higher profile universities. They can expand their enrolment thereby increasing the pressure on smaller, struggling institutions. Certainly this will be the case, if as has been predicted, big technology companies partner with leading university brands.

Guaranteeing quality

Everyone involved in Catholic universities will agree that what was essentially 'remote emergency education' over the past two months is not comparable to the richness of being part of a vibrant learning community.

The formative value of daily interactions with fellow students and staff, the making of new lifelong friends and sharing your social life with them, are key aspects of university life for most students.

Nevertheless, online/blended learning is now an irrevocable element of the university experience. While many FUCE members may congratulate themselves on surviving to the end of this academic year, there is still a lot of naivety about what makes for high quality online pedagogy.

FUCE institutions will be required to invest significant resources to enhance digital learning; providing pedagogical upskilling for academic staff

so that lecture content can be communicated creatively and engagingly online.

In this new model, face to face learning will be more profitably used for discussion and debate for smaller groups and seminars. This has the benefit of enhancing students' technical and intellectual skills.

Virtual mobility & integration

A major benefit of student mobility and exchange programmes is the invaluable exposure it offers to different educational approaches in varied institutions that share a common Catholic ethos. To date, these programmes have relied on foreign travel, physical presence and active engagement with fellow students and university faculties.

A widespread transition to remote and blended learning now provides more possibilities for accessing not only scientific and academic programmes, but also for greater sharing of the Catholic ethos within the FUCE family - without ever leaving home.

In the future I envisage FUCE institutions offering a limited number of online modules or programmes to students from other member institutions, registered as occasional students for free or at a reduced fee. This would be a strong gesture of solidarity, in particular with FUCE members in countries currently experiencing political or economic turmoil.

Apart from facilitating a greater circulation of ideas and values, it would also enable a deeper and more meaningful integration of the FUCE Catholic ethos. By supporting each other, smaller Catholic institutions may be helped to survive.

Another possibility is 'blended mobility', whereby staff or students could travel to a Catholic or Pontifical University for shorter time periods, in conjunction with greater 'virtual mobility', by also accessing online modules from one or more universities. In addition to being financially attractive, it could also foster deeper inter-institutional and international links in a new virtual world.

Kairos moment

Truly this is a *Kairos* moment in education, inviting us to rediscover what was lost and to relearn what we had forgotten of our Christian heritage and roots. Hopefully out of this crisis, we can instill future generations of FUCE graduates with the ambition to become the leaders of hope - by building new relationships based on the values of inclusion, equality and solidarity.

Rev. Prof. Michael Mullaney
President FUCE





SAVE THE DATE FUCE GENERAL ASSEMBLY 2021 20-22 MAY BARCELONA

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NEWS IN BRIEF

POLAND

To commemorate the 5th anniversary of Pope Francis' encyclical letter - **Laudato Si': On Care for Our Common Home** - the Rector of the Jesuit University Ignatianum in Krakow, has signed The Environmental Sustainability Policy Statement of the University. The academic community of Ignatianum is eager to contribute positively to addressing climate change and supporting environmental protection movements, through practical changes, research and educational practices.

See more at: <https://ignatianum.edu.pl/storage/files/May2020/The%20Environmental%20Sustainability%20Policy%20Statement%20AIK3.pdf>

FUCE SURVEY HIGHLIGHTS COMMON CHALLENGES

FUCE first ever Membership Survey was completed during February 2020. In total, 43 responses were received from 32 member universities.



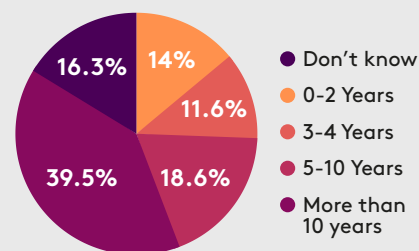
"We are very grateful to all the Presidents, Deans and Heads of International Departments who participated," says survey co-ordinator Professor Sophia Opatska, Vice Rector Academic Affairs, at the Ukrainian Catholic University, Lviv. "The results show that already we have a very good foundation upon which we can build deeper levels of cooperation, so that together we can achieve much more."

The most important reflections from the survey are:

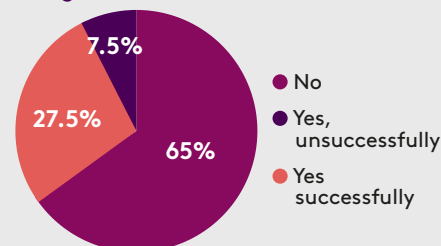
- Most institutions would benefit from developing deeper partnership for research projects, scholarship programmes and Erasmus mobility;
- The most interesting areas for collaboration between members were: Catholic Social Teaching, Future of Catholic Universities, and Technology and Ethics;
- Many respondents acknowledged that they would like more information and support when applying for European funding;
- Developing new programs to meet the demand for lifelong learning and the need of new business models to help institutions to address financial challenges; Although the survey was completed before the COVID-19 crisis, several institutions indicated they were challenged in supporting faculty and staff to make the most of new opportunities; and
- Respondents valued FUCE for its Catholic identity and approach as well as the possibility to be part of an international network.

The results of the membership survey were discussed by FUCE's leaders at their virtual board meeting on 15 May 2020. *"Many of the issues and concerns raised in the survey are common to all of our members. The survey outputs will ensure we reflect more deeply on the long-term issues highlighted. It will encourage us to develop appropriate strategies so that we can help each other to survive the many challenges we all face,"* concluded Professor Sophia Opatska.

How long has your institution been a member of FUCE?



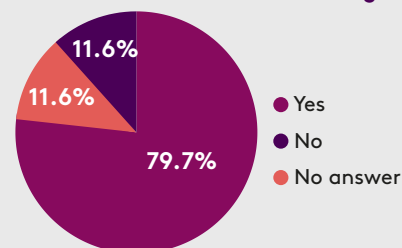
Have you ever applied for EU Funding along with other FUCE members?



Which type of programs did you apply in the past with other FUCE members for European Funding?

- Internationalization of the studies programmes Erasmus +
- TLQAA
- TLQAA+
- E-Taleb

Is your institution interested in applying with other members for EU Funding?



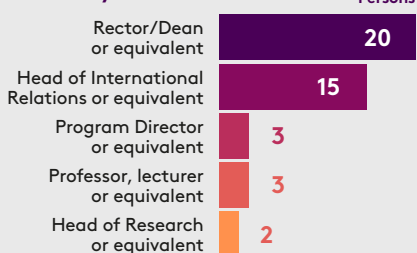
Which topics does your institution have an interest to apply with other FUCE members for European Funding?

- Student mobility
- Faculty mobility
- Research mobility
- New joint programs
- Service learning
- Energy management

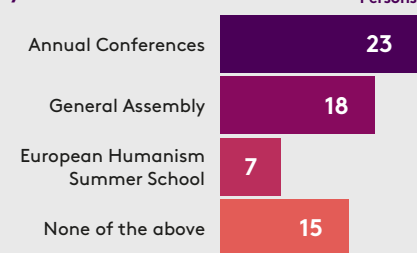
What do you consider to be the unique value proposition of FUCE that positively differentiates it from other associations?

- Catholic identity
- Network of Catholic universities
- Catholic approach in education and scientific research The long standing tradition
- Ecumenism and interreligious dialogue
- Share mission and values
- Faith-based collaboration

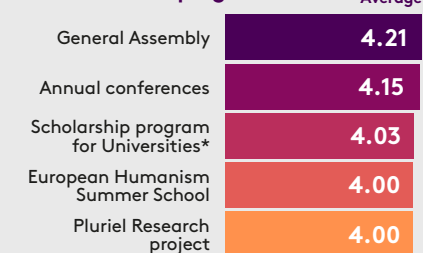
Which of the following best describe your role?



Which FUCE events have you attended?

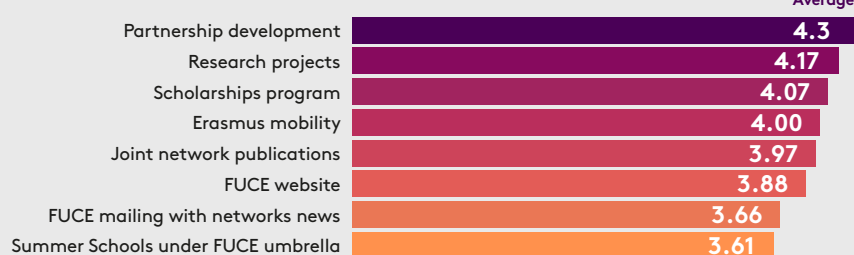


How useful have you found these events or FUCE programs? †

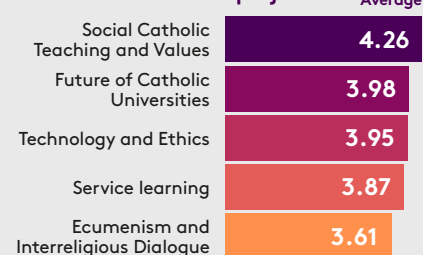


*that are not part of Erasmus mobility

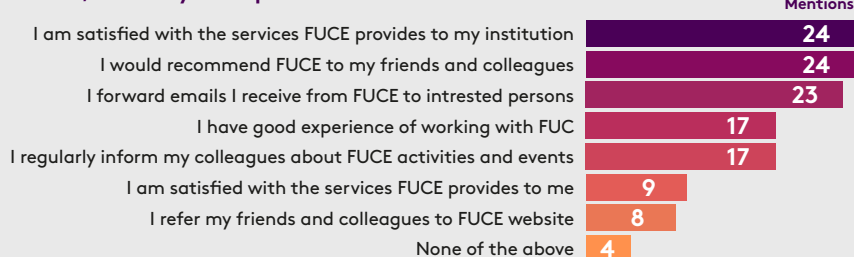
How likely would your institution be looking for the following FUCE activities and services? †



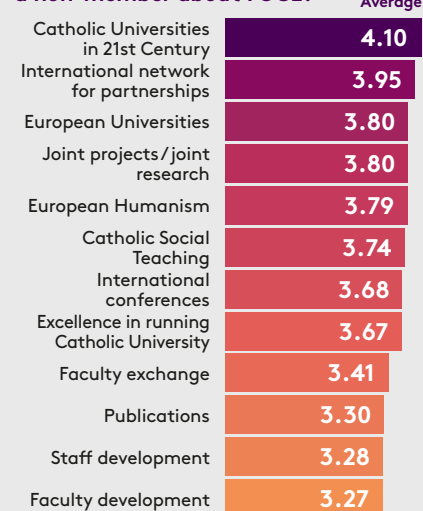
Likelihood that FUCE members could collaborate on these projects? †



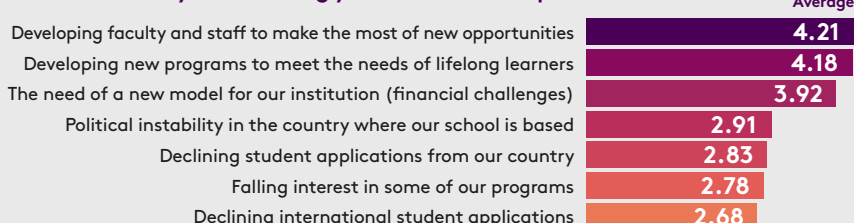
Overall, what is your experience with FUCE?



What are you most likely to tell a non-member about FUCE? †



What are the key issues facing your institution at present?†



What other/new services and activities from FUCE would be most useful for you?

- Staff and Student exchanges
- Research Fundings
- Short-termed study tours and faculty-led programs
- Synergy/coordination in public opinion outreach regarding the major social issues to grow capacity for conducting sustainable European-wide public discourses
- Networking events for joint projects;
- Trainings on specific issues that the different departments of the Universities could attend;
- Joint research projects, publications, academic projects (summer schools, conferences, seminars).

Other issues or ideas, that you would like to raise about your experience as a FUCE member

- "Lean and agile governance"
- "More interest to the catholic university family"
- "More exchange programs, sharing experiences, getting best practice."
- "Exchange of experience between academic and international departments"
- "I believe that it was a right decision to initiate a collaboration under FUCE umbrella in the form of "centers of excellence" like European Humanism and PLURIEL. IFCU has broad area based networks like theology, social sciences, etc. FUCE's approach is much more interesting. I would like to suggest that if it comes to picking up the next topic for networking it should reflect the experience of Eastern Europe."
- "Management and Strategic Planning Training programmes / seminars"
- "University corporate social responsibility"
- "Researchers mobility, research collaboration"

† The higher value the topic has, the more likely it responds to the question.

COVID-19 DIARIOS

LA UNIVERSIDAD PONTIFICIA COMILLAS, MODELO DE GESTIÓN DURANTE EL COVID-19

La pandemia originada por el coronavirus puso en dificultades al sistema universitario español. Muchas universidades tuvieron dificultades para continuar su ritmo habitual de clases. No ocurrió lo mismo en la Universidad Pontificia Comillas, que desde el principio continuó impartiendo docencia no presencial con una valoración muy positiva por parte del alumnado.

Y los datos hablan por sí solo: 300.000 interacciones al día, 75% de alumnos conectados con vídeo síncrono diariamente, 70.000 exámenes telemáticos ya realizados, 485% de incremento de soporte tecnológico a la docencia. Y lo ha hecho a través de herramientas que permiten a los profesores mantener el contacto con sus alumnos, hacer clases en grupo por videoconferencia, dar tutorías online o, por ejemplo, valerse de vídeos que comparten con los estudiantes. Es decir, desarrollando los sistemas que permiten compartir contenidos, llevar a cabo sesiones de clase y mantener el seguimiento y la comunicación con los estudiantes.

Para facilitar y promover toda esta actividad, la universidad puso en marcha un Equipo de Apoyo a la Docencia no Presencial. Este grupo está integrado por el Instituto Universitario de Ciencias de la Educación (ICE), la Unidad de Apoyo a la Innovación Docente (UAID), dependiente del Vicerrectorado de Ordenación Académica y Profesorado, y el Servicio de Sistemas y Tecnologías de Información y Comunicaciones (STIC).

Mientras el STIC se encarga de que todos los sistemas funcionen a pleno rendimiento tecnológico y de dar apoyo técnico al profesorado, tanto el ICE como la UAID dan apoyo metodológico y didáctico a los profesores, buscando la forma de articular materiales y recursos que permitan a los docentes una transición adecuada hacia la docencia no presencial. Para ello, se valen de diferentes recursos. "Hemos generado una estructura de soporte y resolución de dudas, y de generación de documentación y recursos para apoyarles", asegura Jorge Torres, director del ICE. Por su parte, Susana García, directora de la UAID, anuncia que

"El primer gran objetivo fue proteger la salud de nuestros estudiantes y frenar la expansión de la pandemia. El segundo objetivo pasa por mantener nuestro compromiso con estudiantes y empresas colaboradoras. El tercer gran pilar está siendo el esfuerzo de toda la comunidad universitaria"

Mariano Ventosa,
vicerrector de Investigación e
Internacionalización de Comillas.





“atendemos las necesidades de los profesores de forma directa y personalizada”.

Esa estructura se basa en la plataforma Moodle, utilizada desde hace tiempo por los docentes y los alumnos, en la que “hemos preparado un espacio organizado con fichas, video-tutoriales y orientaciones para que los docentes utilicen la herramienta”, explica Torres. También se están realizando webinars que, bajo el título de #ComillasNoPara, permiten mantener la interacción con los profesores, orientarles en el manejo concreto de las herramientas TIC, resolver dudas en su aplicación, y mantener un clima de motivación y de sentimiento de comunidad en un momento de aislamiento. “Próximamente compartiremos, en este espacio, las experiencias de otros profesores en una sección que hemos llamado #CompañerosComparten, fomentando así el aprendizaje colaborativo”, asegura García.

“hemos preparado un espacio organizado con fichas, video-tutoriales y orientaciones para que los docentes utilicen la herramienta”

Comillas está utilizando, además, la herramienta Blackboard Collaborate, que permite impartir clase de manera síncrona (se unen todos los alumnos en un aula virtual), y también otros medios que permiten la docencia asíncrona, como la grabación de vídeos a los que los estudiantes pueden acceder en cualquier momento. “Para los profesores supone un salto cualitativo en el manejo de herramientas



tecnológicas que permiten el desarrollo de la docencia no presencial”, dice Torres. “En general, los profesores están mostrando una alta motivación en la mejora de sus competencias tecnológicas y bastante satisfechos con los materiales proporcionados y el nivel de apoyo. Y lo están haciendo, sobre todo, porque están preocupados por atender bien a sus alumnos”, agrega. En este sentido, “los Decanatos de las Facultades y Escuelas están en conexión frecuente con los delegados de los estudiantes”, explica Obregón.

Con todo, “en Comillas estamos reaccionando bien y, lo que es más importante, la percepción de la comunidad universitaria de que se están manteniendo elevados niveles de mantenimiento de la docencia y de atención al estudiante, y de que Comillas está demostrando su capacidad de alinear todos sus servicios para la consecución de un objetivo común”, indica Torres.

COVID-19 DIARIES

COMILLAS PONTIFICAL UNIVERSITY, A MODEL FOR THE MANAGEMENT OF THE CRISIS SITUATION CAUSED BY COVID-19

The pandemic caused by the coronavirus presented a huge challenge for this Spanish university, as well as for every university in the world. Almost all universities found it difficult to continue their usual rhythm of classes. However, the Universidad Pontificia Comillas, which from the beginning continued the teaching process by switching to virtual online teaching, has received very positive comments from students.

And the data speaks for itself: 300,000 interactions a day, 75% of students connected daily via synchronous video facilities, 70,000 telematic exams already administered, a 485% increase in technological support for teaching. It has done so through tools that allow professors to keep in touch with their students, deliver group classes by videoconference, provide online tutoring and, for example, use videos that were shared with students: In other words, developing systems that allow content to be shared, to hold class sessions and to keep track and communicate with students.

To facilitate and promote all of this activity, the university launched a support team for non-face-to-face teaching. This group is made up of the University Institute of Education Sciences (ICE), the Teaching Innovation Support Unit (UAID), under the supervision of the Vice-Rector's Office for Academic Organization and Teaching Staff, and the Information Technologies and Communications Service (STIC).

While the STIC is in charge of making all systems work at full technological rates of performance and providing technical support to professors, both ICE and UAID provide methodological and didactic support to instructors, seeking ways to articulate materials and resources that facilitate an adequate transition towards non-classroom teaching for professors. To do this, they used diverse resources.

"The first major goal was to protect the health of our students and to slow the spread of the pandemic. The second objective, to maintain our commitment to our students and collaborating companies and institutions. The third great pillar involved the effort made by the entire University Community"

Mariano Ventosa,
Vice-Rector for
Research and
International Affairs





Online instruction is based on the Moodle platform, which has been used for a long time by professors and students, in which *“we prepared and organized our web facilities with files, video-tutorials and guidelines for instructors to use this tool,”* explains Jorge Torres, Director of the ICE. Webinars have also been held that, under the title of #ComillasNoPara (#ComillasDoesNotStop), permitted consistent interaction with professors, in an attempt to guide them in the concrete use of ICT tools, resolve doubts in their application, and maintain a climate of motivation and feeling of community in a moment of isolation. *“Soon we will share, through this platform, the experiences of other instructors in a section that we have called # CompañerosComparten (#Colleagues Sharing), thus promoting collaborative learning,”* stated Susana García, Director of the UAID.

“we prepared and organized our web facilities with files, video-tutorials and guidelines for instructors to use this tool”

Comillas is also using the Blackboard Collaborate tool, which allows classes to be taught synchronously (all students join in a virtual classroom), as well as other means that allow virtual teaching, such as recording videos which students can access at any time. *“For professors, this represents a qualitative step in the management of technological tools that allow*



for the development of non-contact teaching,” says Torres. *“In general, professors are showing high motivation in improving their technological skills and are quite satisfied with the materials provided and the level of support. And they are doing this, above all, because they are concerned about and dedicated to serving their students well,”* he adds. To achieve this, *“the Deans of the Schools and Faculties are in touch constantly with student delegates,”* explains Antonio Obregón, Vice-Rector for Academic Affairs and Professors.

In sum, *“at Comillas we believe that we have reacted well to the crisis and, most importantly, the perception of the university community is that high levels of quality teaching are being maintained. Our goal is for Comillas to demonstrate its ability to align all of its services to achieve a common goal,”* affirms Torres.

JOURNAUX COVID-19

LES UNIVERSITÉS LIBANAISES: COVID-19 ET AUTRES DÉFIS

L'année académique 2019-2020 fut celle de tous les imprévus au Liban. À peine avait-elle démarré, qu'un soulèvement populaire massif secoua le pays le 17 octobre 2019, imposant la fermeture des universités pour une durée variant entre trois et quatre semaines.

À la fois réaction contre la détérioration économique et facteur accélérant sa déflagration, ledit soulèvement impacta violemment les universités, bouleversant les calendriers, les priorités et les budgets.

Contre vents et marées, elles rouvrirent leurs portes en novembre, mais le pire était encore à venir. La crise économique ne faisant que s'aggraver, des centaines de milliers de libanais franchirent, en l'espace de quelques mois, la distance qui les séparait de la pauvreté.

Avec la dévaluation de la livre libanaise, la crise du système bancaire et la perte de dizaines de milliers d'emplois, il était désormais clair que le secteur universitaire ne tarderait pas à connaître de profondes mutations.

À partir de février 2020, la pandémie du COVID-19 vint compliquer la situation davantage. L'arrêt des cours en présentiel et la fermeture des campus mirent les universités, déjà en difficulté, devant des défis majeurs, notamment en ce qui concerne le passage brusque, et pour certaines d'entre elles, complètement impréparé, à l'enseignement en ligne.

“L'arrêt des cours en présentiel et la fermeture des campus mirent les universités, déjà en difficulté, devant des défis majeurs”

Il a fallu précipiter organisation technique, administrative et pédagogique et tenter de réussir, en l'espace de quelques semaines, ce que le gouvernement libanais n'a osé initier depuis des années, à savoir l'engagement du secteur universitaire sur la voie de l'enseignement à distance.

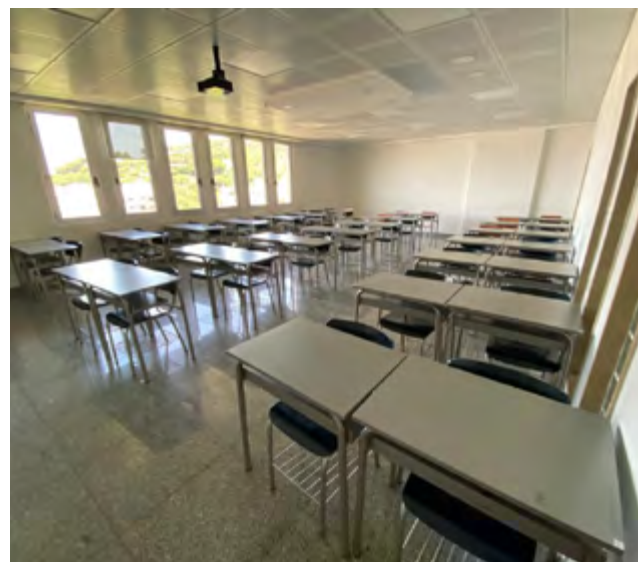
Cette réticence jadis justifiée par la faiblesse des mécanismes d'assurance qualité en place a été



dépassée sous la pression de l'urgence. Mais l'urgence ne facilite qu'en compromettant. Que l'on songe à la qualité de la connexion internet ou à son coût devenu prohibitif pour les familles à revenu modeste ; que l'on songe aux enseignants embarqués sans préparation dans un nouveau paradigme requérant la modification des pratiques et des normes ; que l'on songe à la crédibilité et à l'équité de l'évaluation des enseignements dispensés via des moyens dont l'accessibilité n'est pas également garantie à tous les étudiants ; que l'on songe aux enseignements pratiques qui requièrent le face-à-face entre enseignant et apprenant ou la manipulation directe de matériaux, machines ou autres.

La liste des problématiques et des défis est trop longue pour être rappelée ici dans son intégralité. Et avec le flou qui entoure encore la suite qui sera donnée à cette expérience, et la place de l'enseignement en ligne vis-à-vis de l'enseignement en présentiel, les universités sont condamnées à affronter, chacune à ses propres frais et périls, les scénarios difficiles qui l'attendent en ces temps de crise.

Alors que les universités les plus chères optent pour l'augmentation des bourses, afin de prévenir une chute drastique de leurs effectifs étudiants,



les universités à frais modérés souffrent déjà de décrochage et de non-paiement des scolarités, sachant que ces dernières sont leur principale source de revenu.

Celles qui parmi elles sont nées sous le signe du profit, désertent, probablement, l'enseignement supérieur cessant d'être le business hautement lucratif qu'il fut durant les dernières décennies. Les autres qui, à l'instar des universités catholiques, sont mues par la noblesse de leur mission, ne désertent pas, mais elles s'apprêtent, tant que faire se peut, à traverser le désert.

P. Michel Jalakh, Recteur de l'Université Antonine

COVID-19 DIARIES

LEBANESE UNIVERSITIES FACE EVEN MORE CHALLENGES THAN COVID-19

The 2019–2020 academic year has been tormented by unprecedented events. It had actually barely started when a massive popular uprising shook Lebanon on 17 October 2019, forcing the closure of universities for three to four weeks.

Both a reaction against the economic deterioration and a factor accelerating its outbreak, the uprising violently impacted universities, consequently disturbing their timetables, priorities, and budgets.

Against all odds, the universities reopened in November, but the worst was yet to come. With the economic crisis deteriorating, hundreds of thousands of Lebanese fell below the poverty line in a matter of a few months.

With the subsequent devaluation of the Lebanese Pound, a crisis engulfed the banking sector, leading to tens of thousands of jobs being lost. As a result the university sector soon experienced overwhelming transformations.

Then in February 2020, the COVID-19 pandemic further complicated an already difficult situation. The ending of face-to-face teaching and the closure of the campuses raised major challenges for universities that were already struggling, in particular with regard to the sudden - and for some - the completely unprepared transition to online teaching.

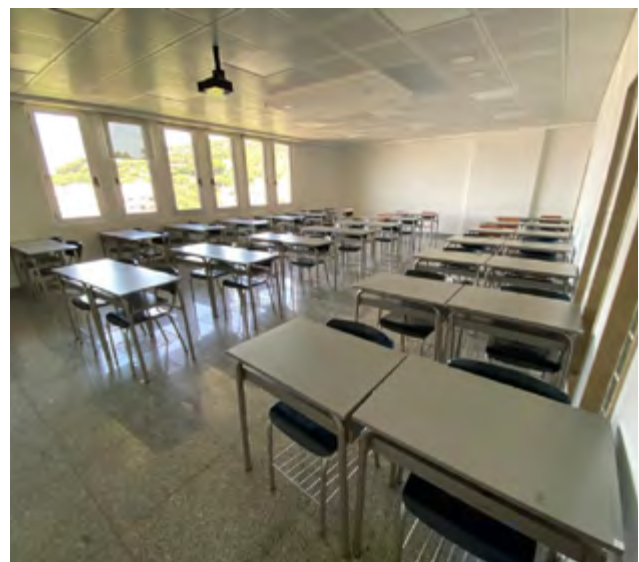
“The ending of face-to-face teaching and the closure of the campuses raised major challenges for universities that were already struggling”

The universities had to rush the technical, administrative, and educational preparations and attempt to achieve, in the period of a few weeks, what the Lebanese government had not dared initiate for years, namely the commitment of the university sector to distance education.



This reluctance, formerly justified by the weakness of quality assurance mechanisms, was overcome under the pressure caused by the emergency. But emergency only implies compromise. Think of the quality of the internet connection or its cost, which has become prohibitive for families subsisting on modest incomes; think of all these instructors that embarked without preparation on a new teaching model that requires the modification of practices and standards; think of the credibility and fairness of the evaluation of learning outcomes provided by tools that are not equally accessible to all students; think of the practical lessons that require face-to-face engagement between instructors and learners or direct use of materials and devices.

The list of issues and challenges is too long to be entirely detailed here. And with the uncertainty that still surrounds the continuity of this experience, and the stand of online education with regard to face-to-face education, universities are condemned to face, each at their own expense and perils, the difficult scenarios that lie ahead in these times of crisis.



While the most expensive universities are opting to increase scholarships in order to prevent a drastic drop in the total number of their students, universities with moderate fees are already suffering from dropouts and unpaid tuition fees, noting that the latter are their main source of income. The universities born out of profit would likely give up on higher education, which is no longer the greatly lucrative business it had been for the past few decades. As for the others - namely the Catholic universities - which are driven by the nobility of their mission, they will not give up, but will be preparing, as much as their capabilities allow, to cross the desert.

Fr. Michel Jalakh, Rector of the Antonine University



COVID-19 DIARIES

LETTER FROM ROME

In Rome, where the ecclesiastical educational system is made up of 22 institutions of higher education, 15,000 students have experienced an unprecedented transformation because of the COVID-19 pandemic. The threat of the coronavirus led to our classrooms being emptied suddenly.

Face to face teaching was replaced immediately by new forms of online teaching and learning. Happily professors, students and all other staff have risen to the challenge of this emergency and the semester continued, despite the unprecedented conditions.

Feedback from students has been positive, and professors have discovered previously unknown possibilities through the use of online teaching. At the same time, all of us are aware that no technology can substitute for the richness of on-site teaching that continues through informal contacts and in other formative activities that only a life on campus can offer.

Daily presence and interpersonal contacts are fundamental in the formative role of ecclesiastical institutions of higher education. The student

population is composed of lay men and women, seminarians, priests, religious men and women coming from all over the world; their daily contact with each other offers an intercultural experience that is formative *per se*. In Rome, the centre and the periphery live together in a way that enriches





those who are in formation for a future ecclesial mission for their whole life.

If we have to stay at home, relying only on distance learning, many formative possibilities will be lost. Our desire, therefore, is to be able to return to on-site learning, presupposing some transition period that will require flexibility and mixed forms of teaching.

“All of us are aware that no technology can substitute for the richness of on-site teaching that continues through informal contacts and in other formative activities that only a life on campus can offer.”

It is often said that life will not be the same as before. In reality, we are learning a great deal, even from the didactic point of view, from this interregnum of forced experimentation. The disruption of our habits and certainties requires us to be more creative and be more open to innovation.

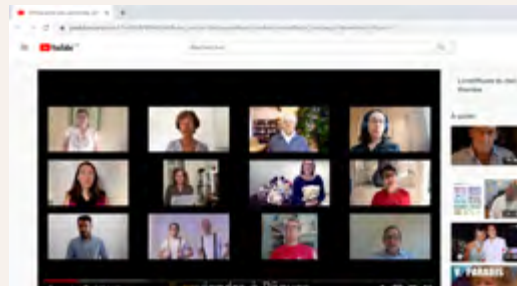
Likewise, the crisis we are facing brings new problems that must be included in the research, opening new paths to true inter- and trans-disciplinarity, as asked by Pope Francis in his apostolic constitution *Veritatis Gaudium*.

During this difficult period, the role of the Conference of Rectors of Roman Pontifical Universities and Institutions (CRUIPRO) has been greatly strengthened. The rectors have met more frequently in videoconferences and thematic meetings have been organised for those responsible for various sectors of university life. We have also felt the indispensable support of the Congregation for Catholic Education which encourages us and confirms our common mission at the service of the Church and the World.

P. Nuno da Silva Gonçalves S.J.

Rector of the Pontifical Gregorian University

NEWS IN BRIEF



FRANCE

Les Vocalistes Européens dont la plupart des membres est issue du **Choeur de l'Université Catholique de Lille** sont constitués d'une trentaine de chanteurs aux profils variés. Ils couvrent la totalité des répertoires classiques, contemporains et actuels. Dans cette période particulière, les Vocalistes Européens ont souhaité poursuivre leur mission: **Chanter et Partager**. Ils ont ainsi créé une vidéo interactive: **Le Karoké des Comptines Confinées**. <https://youtu.be/BA2VWFABUn8?t=11>



ALBANIA

Since 2016, the Catholic University 'Our Lady of Good Counsel' in Tirana, has developed a **Centre of Peace Science Integration and Co-operation (CESPIC)** to promote the interdisciplinary study of Peace [see <https://unizkm.al/categories/cespic/posts/>]. In particular, CESPIC's approach is based on three conceptual pillars: (I) Peace 'from within'; (II) Peace among states, polities and communities; (III) Peace as global public good. CESPIC recently organised a roundtable to assess the impact of COVID-19 on social well-being, on inequality and economic development, and on international relations. See a podcast of the meeting here <https://unizkm.al/posts/slug/the-shape-of-things-to-come-2/>

IN CROATIA, A DEVASTATING EARTHQUAKE ADDS TO COVID-19 WOES



The Croatian capital Zagreb was hit on 22 March 2020 by the strongest earthquake in 140 years, leaving the city centre severely damaged, including the city's Cathedral. Thankfully following inspection it was confirmed that the main part of the Catholic University of Croatia campus did not sustain considerable damage. However, some older unrenovated buildings on campus were so extensively damaged that they will require thorough reconstruction.

Speaking after the earthquake the University's Rector, Prof. Željko Tanjić, PhD, said: *"The university community is devastated by the damage inflicted on our capital Zagreb and its surrounding area, especially by the fact that many people have been left homeless. We feel compassion not only for the families of our employees and students who have*

lost their homes but for all those who are spiritually shaken by the extensive damage to our sacred and cultural heritage."

The earthquake added to the major challenges already posed by COVID-19. However after several months of online teaching, the university has reported that 95% of its scheduled classes were held as per the regular curriculum. The Vice-Rector for Academic Affairs and the Heads of Departments confirmed that students were attending classes in large numbers and expressed satisfaction at the level of student participation and engagement.

Following guidelines issued by Croatia's Ministry of Science and Education, faculty and administrative staff returned to their offices on campus at the start of June.

Meanwhile, students from the university's Department of Psychology formed a choir: PSIHOZBOR and recorded a video of the song [Lean on Me #hkszajednosmojaci](#)

Their message of hope was this: *"In these challenging times, when uncertainty and anxiety prevail, we would like to remind you that we are stronger than fear, tougher than disease and invincible in our faith,"* concluded Prof. Tanjić.



NEWS IN BRIEF



GEORGIA

Sulkhani-Saba Orbeliani University (Sabauni), which is the only Catholic university in the Caucasus region, will begin to offer PhD programmes in Theology and Law from 2021. Founded in 2001, Sabauni is committed to serve Christian values, and also contribute to developing the fields of Social and Humanitarian Sciences, which are new for the region. While the majority of its programmes are taught in Georgian, it also teaches a suite of courses entirely in English, such as a BA in Business Administration and an MA in International Business Law. From the January 2021, a modern student dormitory will open for both local and foreign students.

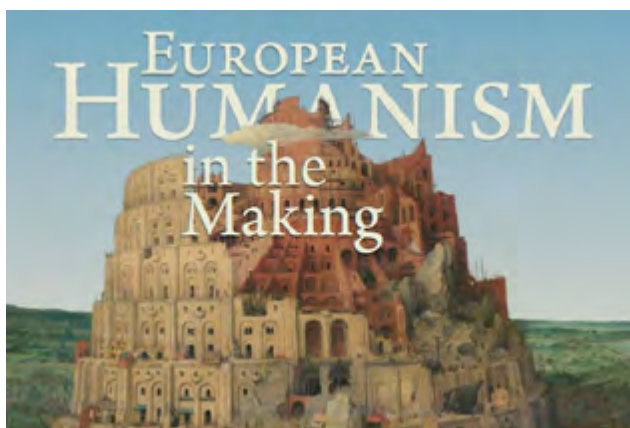
<http://sabauni.edu.ge/en>



BELGIUM

Under the umbrella of the **'Europe and Solidarity'** programme run by the University Centre Saint-Ignatius Antwerp (www.ucsia.org), a conference on **'Leadership Education for Social Transformation - Supporting Social Inclusion of Vulnerable Groups in European Societies'** hosted by the Jesuit University Ignatianum in Krakow, originally organised for this September, has been rescheduled to 19-21 April 2021. If you would like to contribute a paper or a workshop proposal please contact the organiser: marek.liszka@ignatianum.edu.pl

EUROPEAN HUMANISM 2020 SUMMER SCHOOL POSTPONED TO JULY 2021



This year's 'European Humanism in the Making' summer school in Gubbio, Italy has been deferred to July 2021. Students who had been selected for this year's programme will be invited to participate next year instead.

After careful reflection and consultation with the organising team from UCSIA and the five course coordinators, FUCE's Board of Directors took the difficult decision to cancel the 2020 gathering. The course organisers felt they could not offer a viable alternative solution - such as online teaching - as the lived experience and the cultural exchange between the students is the prime objective of the programme.

Twenty-seven bachelor students from seventeen universities (from Lebanon, Ukraine, Georgia, Poland, Croatia, France, Italy, Belgium, Ireland, Portugal) and various disciplines (law, political sciences, economy, sociology, history, literature, theology) had registered for the summer school.

The UCSIA course organisers have confirmed their commitment to the project and propose to focus instead on adjusting the course content of the summer school to the new context of COVID-19 which has raised additional issues to be tackled within the framework of 'European humanism in the making' (cf. presentation of the course on the [UCSIA website](#)). The coronavirus crisis confronts us with new questions as to institutional management (course I), literary travel (course II), interaction between scientists and policy makers (course III), social humanism (new cases to discuss in course



Coordinators Peter Hanenberg and Patricia Santos Rodríguez at the 2019 summer school



The FUCE summer school encourages student mobility and believes academic excellence can be achieved by collaboration and communication

“People say that we are searching for a meaning of life. I think we are searching for an experience of being alive.”

IV) and leadership for social transformation (good practices of solidarity to investigate in course V). A comprehensive course manual will be developed for use during the 2021 summer school.

The new programme content will be submitted to the FUCE Board in the Autumn and an updated course manual should be ready for the General Assembly in May 2021. As such, continuity is given to the project, while the support of the FUCE is assured. We look forward to receiving the very motivated new group of students next summer in the beautiful setting of Gubbio for a lifetime experience.

“I want to learn more about Catholic Social Thought and how it influences Europe.”



Students and lecturers from 15 universities in the FUCE network gathered in the medieval Italian town of Gubbio in July 2019 to learn about, discuss and question the ideas and experiences that give shape to the continent of Europe.

L'INTELLIGENCE ARTIFICIELLE PERMETTRA-T-ELLE AUX MACHINES D'AVOIR UNE CONSCIENCE ?

Thierry Magnin





« On sait faire des machines qui fixent leur attention ou qui ont une réflexivité, mais est-ce la même chose que notre conscience ? »

Introduction

L'Intelligence artificielle (IA) est un ensemble de techniques numériques performantes qui permettent le traitement d'un très grand nombre de données que l'homme ne pourrait intégrer seul. A titre d'exemple, le recours à l'IA dans l'imagerie médicale et son analyse est déjà pertinente pour détecter le tout-début d'un mélanome afin de le soigner au plus vite. Et combien d'exemples dans les domaines de la santé, des assurances, de l'économie, des transports...L'IA pose aussi de nombreuses questions d'éthique, parmi lesquelles on note la question de la transparence des algorithmes utilisés, par exemple pour la prévoyance des risques dans le monde de l'assurance, ou bien la question des emplois avec le remplacement des humains par des « robots intelligents », ou la transformation des métiers, de médecin par exemple au sein des systèmes de santé. Il en est une autre qui se situe à la fois sur le terrain de l'éthique mais plus largement de l'anthropologie : les machines intelligentes peuvent-elles avoir une conscience comme certains le pensent ? Dans la perspective de copier, voire un jour d'améliorer le cerveau humain que les neurosciences étudient et que l'IA cherche à simuler, une forme de « conscience artificielle » apparaîtra-t-elle ? Que veut dire le mot conscience pour une machine ? Quel éventuel rapport avec la conscience chez l'homme ?

Devant ces vastes questions que certains refusent (une machine ne peut pas avoir de conscience !), il est important de tenter des pistes de réflexion : c'est le but de ce modeste essai. Dans nos universités catholiques, nous proposons des éléments clés de l'anthropologie chrétienne à nos étudiants. Quelle pertinence sur cette question des rapports entre conscience humaine et une éventuelle conscience des machines ? Il est bon d'aider nos étudiants à vivre ainsi de sains rapports avec les machines « dites intelligentes » qu'ils utilisent déjà et qu'ils trouveront demain dans l'exercice de leur métier.



Une éventuelle conscience des machines intelligentes ?

Chez les neuroscientifiques, différents niveaux de conscience sont envisagés, sans oublier le rôle important de l'inconscient cognitif :

- La conscience désigne d'abord l'*intuition* (pur ressenti) qu'a le sujet de sa propre expérience subjective, indépendamment de toute connaissance réflexive. On parle ici de conscience *primaire* (Edelman, 1992), de conscience *noyau* (Damasio, 1995) ou encore de conscience *phénoménale* (Ned Block, 1980).
- Dans sa seconde acception, la conscience exprime la *connaissance* qu'a le sujet de cette expérience subjective : pensée, sentiment, perception, rêve, raisonnement. Ne dit-on pas que l'on perd connaissance lors d'une syncope ? On désigne cette seconde dimension comme conscience *secondaire* ou *d'ordre supérieur* (Edelman), conscience *étendue* (Damasio) ou conscience *d'accès* (Ned Block). Son étude objective suppose de prendre en compte le témoignage des sujets et donc de recourir à l'introspection.
- La conscience désigne enfin la *conscience de soi* dans son rapport à l'autre et renvoie au sens ultime de l'action lorsqu'il s'agit de la conscience morale. La normativité est une dimension nécessaire de cette conscience morale telle qu'elle s'exprime dans le jugement éthique. Il s'agit d'une réalité qui dépasse largement le cadre des sciences de la nature, bien que la psychologie évolutionniste et la neuroéthique prétendent désormais fournir une justification purement naturaliste des valeurs morales. Comme vous le savez, on parle d'éthique des neurosciences mais aussi des neurosciences de l'éthique !

Le sujet de l'éventuelle « conscience des machines » en IA fait l'objet de nombreuses controverses débattues avec le grand public comme dans l'article de la revue « Les Echos » dans son numéro du 26 février 2018.

C'est en 1950 qu'Alan Turing pose la question de savoir si une machine peut « penser », dans un article de la revue « Mind ». Il y introduit le test qui porte désormais son nom, le « jeu de l'imitation ». En 1956 deux chercheurs américains, John McCarthy et Marvin Minsky, utilisent pour la première fois le terme « intelligence artificielle » et organisent un colloque sur le sujet. En 1957, le Perceptron, conçu par le psychologue américain Frank Rosenblatt, est le premier logiciel capable d'apprentissage. Il reconnaissait les lettres de l'alphabet. En 1997 l'ordinateur Deep Blue (IBM) bat aux échecs le champion du monde Garry Kasparov. En 2016 un système d'intelligence artificielle, AlphaGo (Google DeepMind), bat l'un des meilleurs joueurs de Go au monde. Mais on peut se demander : même si elle gagnait au jeu de l'imitation (Turing), cela signifierait-il que la machine pense comme nous, ou qu'elle est dotée de conscience ?

« Un rat a plus de conscience que les meilleurs systèmes d'intelligence artificielle (IA) qu'on est capable de construire »

« Un rat a plus de conscience que les meilleurs systèmes d'intelligence artificielle (IA) qu'on est capable de construire », indique Yann LeCun, directeur de la recherche en IA chez Facebook. A titre d'exemple, on peut partir de la manière dont une machine - ou une personne - perçoit le jaune d'un citron. L'une ou l'autre peut décrire à la perfection ce jaune. Mais cela ne dit pas si la machine sait de quoi elle parle, ou si elle se comporte comme un bon élève qui récite sa leçon sans rien comprendre.

« On sait faire des machines qui fixent leur attention ou qui ont une réflexivité, mais est-ce la même chose que notre conscience ? » répond Jean-Gabriel Ganascia, chercheur au Laboratoire d'informatique de Sorbonne Université et auteur de l'essai « Le Mythe de la singularité » (Seuil, 2017)

Et l'article des Echos de conclure : quel que soit leur domaine, les chercheurs s'accordent sur un point : ce n'est pas une question de puissance de calcul. « Un ordinateur quantique ne serait pas plus conscient », ajoute Pierre Uzan, professeur de philosophie à l'université Paris Diderot et auteur de « Conscience et physique quantique » (Vrin, 2017). Lui observe que cela ne répond pas à la question de l'approche en première personne (le « je »), qui semble hors d'atteinte de la science numérique.

On peut ainsi indiquer plusieurs points essentiels sur l'IA aujourd'hui en tentant d'extrapoler pour

demain, tout en situant l'IA devant les découvertes des neurosciences :

- L'IA se situe aujourd'hui sur le terrain de la simulation. Et il y a ainsi un seuil entre « simuler » une émotion et l'éprouver. De même pour les motivations de l'homme.
- Comprendre le rôle des motivations reste justement très essentiel dans l'étude de la conscience et des choix de conscience que nous posons. C'est ce que montrent clairement les neurosciences et que l'IA ne prend pas en compte aujourd'hui.
- Les neurosciences montrent que l'émotion, avec sa dimension communicationnelle, conduit ainsi l'homme qui l'éprouve à attribuer une valeur aux choses à partir de laquelle il pose des choix de vie quotidienne. La machine apprenante n'en est pas là !
 - Le robot n'a pas de corps pour éprouver des émotions avec des liens émotion-raison essentiels, selon les neurosciences pour les choix posés par l'homme. On serait tenté de faire du corps humain un simple support, ce qui cantonne la personne dans un seul « esprit », vu par analogie comme un programme informatique. Il y a là un véritable défi pour l'anthropologie !
- La « naturalisation de l'esprit humain » en science aujourd'hui procède d'une triple réduction : réduction de l'esprit à la cognition, réduction de la cognition au calcul, réduction du calcul à un mécanisme (et donc réduction de l'esprit au mécanisme). Mais peut-on dire que « penser c'est calculer » ?
- Le même mot français « esprit » désigne à la fois le mental, la cognition, c'est-à-dire le *mind*, et le principe même de l'être connaissant, le *pneuma* ou *spirit*. Pour compliquer les choses, l'esprit dans sa première acception (*mind*) peut désigner soit l'opérateur (le système de traitement), soit les opérations (la mise en œuvre de règles d'inférence), soit encore le résultat (le contenu) de ces opérations (les connaissances).
- Pour les sciences cognitives l'esprit s'identifie au mental, lui-même, en principe, réductible à la numérisation. Doit-on alors considérer que certaines formes complexes de numérisation pourraient accéder à l'esprit ? Ou bien existe-t-il une forme d'esprit irréductible au mental, lui-même irréductible à la numérisation ? Bien sûr répondent les philosophes qu'il est important ici d'entendre dans la mesure où ils acceptent les questions des scientifiques de l'IA (ceci entre dans le projet actuel NHNAI piloté par l'UCLy avec quatre autres universités catholiques de la FUCE).



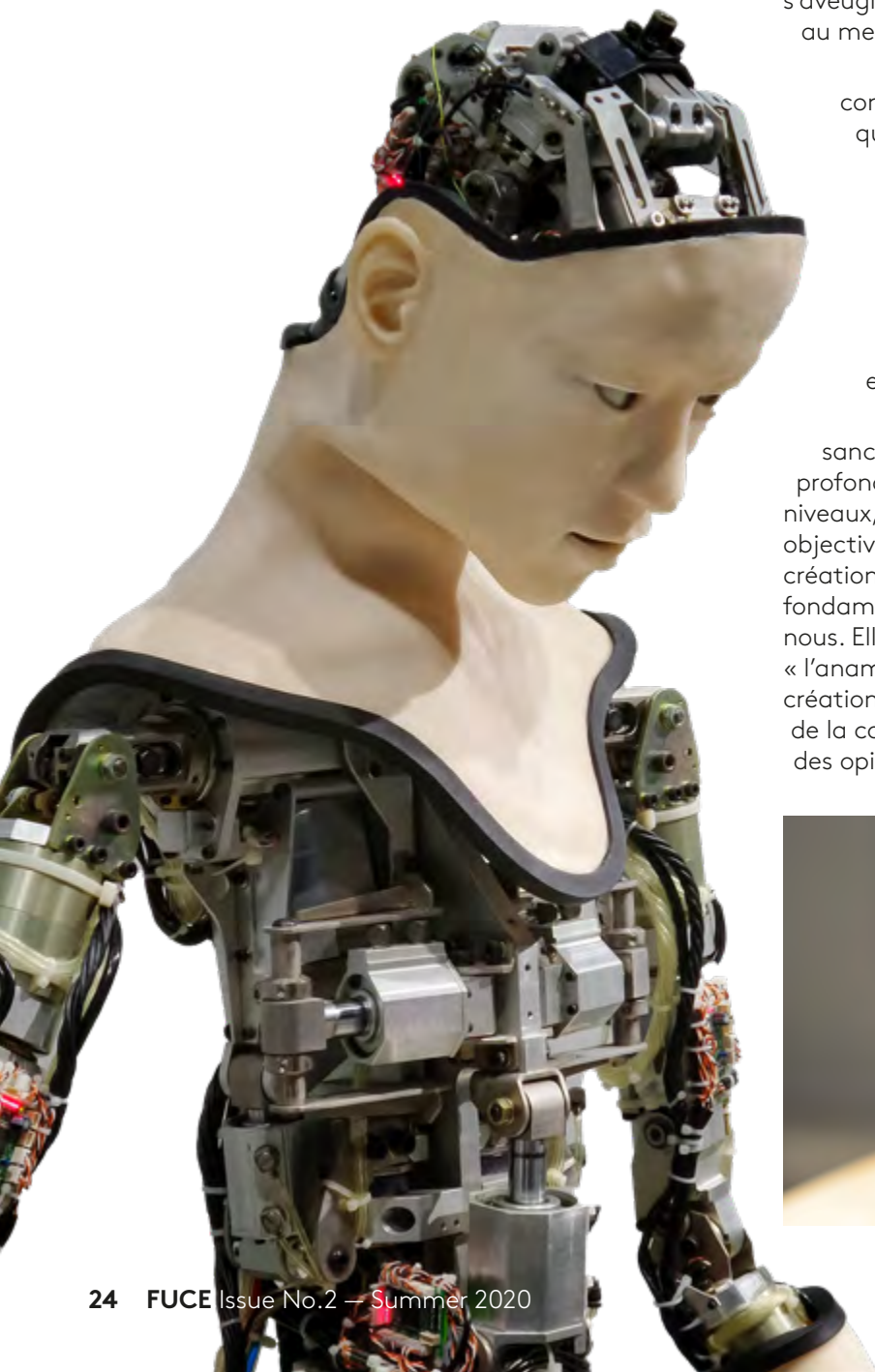
La « naturalisation de l'esprit humain » en science aujourd'hui procède d'une triple réduction : réduction de l'esprit à la cognition, réduction de la cognition au calcul, réduction du calcul à un mécanisme

Réflexion chrétienne sur la conscience en regard de l'IA

Tout en prenant en compte les différents niveaux de conscience présentés en début d'article, l'Église catholique évoque la conscience humaine comme le « sanctuaire intérieur » où chacun doit décider de son action devant Dieu. L'apôtre saint Paul reprend au stoïcisme la notion de syndérèse (Rm 2, 14-16) : tout être humain entend en lui une voix qui lui dit : « *Fais ceci, évite cela* » et se montre digne de lui-même s'il agit ou s'abstient d'agir, non en cédant à une contrainte, qu'elle soit physique ou morale ou culturelle, mais en reconnaissant cette voix et en tâchant de correspondre à ce qu'elle lui indique. Une telle compréhension de l'intériorité de la liberté humaine traverse toute la tradition chrétienne ; elle est synthétisée dans la constitution pastorale *Gaudium et Spes* du concile Vatican II (GS 16). La tradition chrétienne la combine constamment avec la capacité de l'être humain de s'aveugler quant au mal et au bien ou de se refuser au meilleur.

Il convient de bien préciser la réalité de la conscience dont il est question ici. En tant qu'elle se distingue de l'inconscience, la conscience est d'abord la connaissance immédiate par le sujet de sa propre activité psychique, la capacité de distinguer ce qui se passe en lui et ce qui se passe hors de lui. Cet état de conscience rend le sujet apte à poser des jugements pour réguler sa conduite et agir en première personne (« *J'ai fait ceci* »).

La conscience, entendue comme sanctuaire intérieur, est une réalité plus profonde, plus personnelle. Elle connaît deux niveaux, intimement liés : la syndérèse, dimension objective de la conscience, marque de notre création à l'image de Dieu où demeure la marque fondamentale du bien et du mal, inscrite en nous. Elle est à l'intime de la liberté humaine « l'anamnèse » (ce qui permet la mémoire) de sa création à l'image de Dieu. C'est aussi la « voix de la conscience » qui résonne en nous, au-delà des opinions et des passions. Le jugement de



conscience que nous opérons dans la réponse à cette voix intérieure suppose un travail d'appropriation de la distinction du bien et du mal et d'application à chaque situation concrète. Ce niveau-là de la conscience exige une éducation constante, un travail vigilant de réflexion pour éviter de perdre l'acuité du jugement.

Si les neurosciences travaillent sur le Mind, si l'IA peut (et pourra) progressivement en simuler bien des aspects, c'est le passage du Mind au Spirit qu'il faut ici indiquer comme essentiel à la notion chrétienne de conscience éclairée, éclairée par l'Amour de Dieu.

Cet Amour s'est fait Parole, Verbe, Christ incarné. Dans la méditation dite de pleine conscience (*Mindfulness*) à partir de laquelle des neuroscientifiques travaillent aujourd'hui, on est au niveau du *Mind* justement, même s'il y a une ouverture possible à l'esprit, fine pointe de l'âme. En fait, dans la tradition chrétienne, c'est la Parole qui agit à la jointure de l'âme et de l'esprit (cf Hébreux 4,12-13 : *Frères, Elle est vivante, la Parole de Dieu, énergique et plus coupante qu'une épée à deux tranchants ; elle va jusqu'au point de partage de l'âme et de l'esprit, des jointures et des moelles ; elle juge des intentions et des pensées du cœur*). C'est cette Parole d'amour pascal qui permet à notre esprit de laisser l'Esprit lui parler. Cela est vrai pour une personne, pour une communauté, pour un peuple qui entraîne toute l'humanité. Et c'est cette Parole qui Personnalise car le seul silence intérieur du *Mindfulness*, aussi bénéfique qu'il soit, ne suffit pas pour entendre un « Tu » qui fait surgir le « Je » et constitue réellement le « Nous ».

Certains pensent que l'idée de transcendance a germé dans le *Mind* humain par sélection naturelle comme la meilleure défense devant l'angoisse de la mort. C'est possible. Mais la Parole et son action font passer de l'idée de transcendance à l'expérience de la révélation. Thomas d'Aquin disait que l'homme est « capable de Dieu », non seulement de le penser mais aussi de le recevoir, d'abord ! Blaise Pascal disait qu'il est capable d'infini et qu'il devient lui-même dans l'expérience de l'Agapé. L'homme est « traversé d'infinités », « l'homme passe infiniment l'homme » ajoute-t-il ; il a une capacité d'ouverture à la Source et l'expérience de l'indicible. L'indicible ne peut justement pas se mettre en calcul. Zundel

ajoutera que c'est justement parce qu'il y a dans l'homme cette capacité infinie de Dieu, cette transparence possible, qui est la condition même de la révélation de Dieu dans l'homme, c'est parce qu'il est cet abîme de grandeur, qu'il faut s'approcher de l'homme comme on s'approche du sanctuaire de la divinité. N'est-ce pas ici qu'on approche le propre de la conscience de l'homme dont aucun calcul ne peut atteindre ?

En guise de conclusion

Zundel disait que lorsqu'il arrive au monde, l'homme est d'abord un « moi préfabriqué ». Et il ajoute que si les racines biologiques de l'humain sont derrière lui, les racines de la personne humaine sont devant elle. L'humain devient lui-même une personne quand il passe du « moi préfabriqué » au « moi oblatif », quand il se donne aux autres en conscience, gratuitement. Et cela élargit et éclaire sa conscience, comme le dit la tradition chrétienne. Les neurosciences et l'IA travaillent sur le « moi préfabriqué » qu'elles cherchent à comprendre et à simuler, à dépasser pour certaines tâches avec des machines dites intelligentes.



Mais est-ce que le « je » peut véritablement advenir dans cette amélioration supposée du moi préfabriqué, dans l'optique du « penser c'est calculer » ? Nous ne le pensons pas. Pour advenir, le « je » et le « nous » sont comme en attente de cette amorisation indispensable, laquelle se reçoit personnellement et collectivement. L'expérience de la Parole, de l'Agapé est ainsi révélatrice de l'irruption du « je », comme Blaise Pascal l'a si fortement vécu dans la dernière partie de sa vie. La joie d'être qui survient après une telle expérience est l'expression d'une gratuité qu'aucun calcul ne peut contenir ni fournir, gratuité à travers laquelle le « je » et le « nous » adviennent ensemble, conscience personnelle et conscience collective dans un même mouvement de croissance alimenté par les gestes d'amour du moindre d'entre nous.

Prof. Thierry Magnin

¿PERMITIRÁ LA INTELIGENCIA ARTIFICIAL QUE LAS MÁQUINAS TENGAN CONCIENCIA?

Thierry Magnin





«Sabemos cómo hacer máquinas que fijan la atención o tienen reflejos, pero ¿es lo mismo que nuestra conciencia? »

Introducción

La Inteligencia Artificial (IA) es un conjunto de técnicas digitales de alto rendimiento que permiten procesar una gran cantidad de datos que el hombre no podría incorporar por sí solo. Por ejemplo, el uso de la IA en el diagnóstico por imágenes y su análisis ya es pertinente para detectar el comienzo mismo de un melanoma para tratarlo lo más rápidamente posible. Y cuántos ejemplos en los ámbitos de la salud, los seguros, la economía, el transporte... La IA también plantea muchos interrogantes éticos, entre los que cabe destacar la cuestión de la transparencia de los algoritmos utilizados, por ejemplo, para la previsión de riesgos en el ámbito de los seguros, o la cuestión de los empleos con la sustitución de los humanos por «robots inteligentes», o la transformación de las profesiones, de médico por ejemplo dentro de los sistemas de salud. Hay otra que es tanto ética como más ampliamente antropológica: ¿pueden las máquinas inteligentes tener una conciencia como algunos piensan? Con el fin de copiar, o incluso mejorar algún día, el cerebro humano que las neurociencias están estudiando y que la IA busca simular, ¿aparecerá una forma de «conciencia artificial»? ¿Qué significa la palabra conciencia para una máquina? ¿Cuál es la posible relación con la conciencia en los humanos?

Frente a estas vastas preguntas que algunos se niegan a responder (¡una máquina no puede tener conciencia!), es importante probar algunas vías de reflexión: este es el propósito de este modesto ensayo. En nuestras universidades católicas, proponemos a nuestros estudiantes elementos clave de la antropología cristiana. ¿Qué relevancia tienen en esta cuestión de la relación entre la conciencia humana y una posible conciencia de las máquinas? Es bueno ayudar a nuestros estudiantes a vivir de esta manera una relación sana con las máquinas «inteligentes» que ya utilizan y que encontrarán mañana en el ejercicio de su profesión.



¿Una posible conciencia de las máquinas inteligentes?

Entre los neurocientíficos, se prevén diferentes niveles de conciencia, sin olvidar el importante papel del inconsciente cognitivo:

- La conciencia se refiere en primer lugar a la *intuición* (sentimiento puro) del sujeto de su propia experiencia subjetiva, independiente de cualquier conocimiento reflexivo. Hablamos aquí de la conciencia *primaria* (Edelman, 1992), de la conciencia *nuclear* (Damasio, 1995) y de la conciencia *fenoménica* (Ned Block, 1980).
- En su segunda acepción, la conciencia expresa el *conocimiento* del sujeto de esta experiencia subjetiva: pensamiento, sentimiento, percepción, sueño, razonamiento. ¿No se dice que uno pierde la conciencia durante el síncope? Esta segunda dimensión se denomina conciencia de *orden secundario o superior* (Edelman), conciencia *ampliada* (Damasio) o conciencia de *acceso* (Ned Block). Su estudio objetivo presupone tener en cuenta el testimonio de los sujetos y por lo tanto recurrir a la introspección.
- Por último, la conciencia designa la *conciencia del yo* en su relación con el otro y se refiere al significado último de la acción cuando se trata de la conciencia moral. La conciencia normativa es una dimensión necesaria de esta conciencia moral tal como se expresa en el juicio ético. Esta es una realidad que va mucho más allá de las ciencias naturales, aunque la psicología evolutiva y la neuro ética afirman ahora que proporcionan una justificación puramente naturalista de los valores morales. Como saben, estamos hablando de la ética de las neurociencias, ¡pero también de las neurociencias de la ética!

El tema de la posible «conciencia de las máquinas» en la IA es objeto de muchas controversias debatidas con el público en general, como en el artículo de la revista «Les Echos» en su número del 26 de febrero de 2018.

Fue en 1950 cuando Alan Turing planteó la cuestión de si una máquina puede «pensar», en un artículo de la revista «Mind». Introdujo la prueba que ahora lleva su nombre, el «juego de imitación». En 1956 dos investigadores americanos, John McCarthy y Marvin Minsky, utilizaron por primera vez el término «inteligencia artificial» y organizaron una conferencia sobre el tema. En 1957, el Perceptrón, diseñado por el psicólogo americano Frank Rosenblatt, fue el primer software capaz de aprender. Reconoció las letras del alfabeto. En 1997 la computadora Deep Blue (IBM) derrotó al campeón mundial Garry Kasparov en el ajedrez. En 2016 un sistema de inteligencia artificial, AlphaGo (Google DeepMind), derrota a uno de los mejores jugadores de Go del mundo. Pero uno puede preguntarse: aunque ganara en el juego de la imitación (Turing), ¿significaría esto que la máquina piensa como nosotros, o que está dotada de conciencia?

«Una rata tiene más conciencia que los mejores sistemas de Inteligencia Artificial (IA) que podemos construir»

«Una rata tiene más conciencia que los mejores sistemas de Inteligencia Artificial (IA) que podemos construir», dice Yann LeCun, director de investigación de la IA en Facebook. Como ejemplo, podemos empezar por la forma en que una máquina - o una persona - percibe el amarillo de un limón. Cualquiera de los dos puede describir este amarillo perfectamente. Pero no dice si la máquina sabe de qué habla, o si se comporta como un buen estudiante que recita la lección aprendida sin entender nada.

«Sabemos cómo hacer máquinas que fijan la atención o tienen reflejos, pero ¿es lo mismo que nuestra conciencia?» responde Jean-Gabriel Ganascia, investigador del Laboratorio de Informática de la Universidad de la Sorbona y autor del ensayo «El mito de la singularidad» (Seuil, 2017).

Y el artículo «Les Echos» concluye: cualquiera que sea su campo, los investigadores están de acuerdo en un punto: no es una cuestión de potencia de cálculo. «Un ordenador cuántico no sería más consciente», añade Pierre Uzan, profesor de filosofía de la Universidad de París Diderot y autor de «Conciencia y Física Cuántica» (Vrin, 2017). Observa que esto no responde a la pregunta del enfoque en primera persona (el «yo»), que parece estar fuera del alcance de la ciencia digital.

Podemos así indicar varios puntos esenciales sobre la IA hoy en día en un intento de extrapolar para mañana, mientras situamos la IA por delante de los descubrimientos de la neurociencia:

- La IA hoy en día se sitúa en el ámbito de la simulación. Y así hay un umbral entre «simular» una emoción y experimentarla. Lo mismo se aplica a las motivaciones humanas.
- Comprender el papel de las motivaciones sigue siendo muy esencial en el estudio de la conciencia y de las elecciones de conciencia que hacemos. Esto es lo que las neurociencias muestran claramente y que la IA no toma en cuenta hoy en día.
- - Las neurociencias muestran que la emoción, con su dimensión comunicativa, lleva a la persona que la experimenta a atribuir un valor a las cosas a partir del cual toma decisiones en la vida cotidiana. ¡La máquina de aprendizaje todavía no ha llegado a este punto!
- El robot no tiene un cuerpo para experimentar emociones con vínculos emocionales-rationales esenciales, según las neurociencias, para las elecciones hechas por el hombre. Sería tentador convertir el cuerpo humano en un mero soporte, lo que confinaría a la persona a una sola «mente», vista por analogía como un programa informático. ¡Esto es un verdadero desafío para la antropología!
- La «naturalización de la mente humana» en la ciencia actual procede de una triple reducción:

reducción de la mente a la cognición, reducción de la cognición al cálculo, reducción del cálculo a un mecanismo (y, por tanto, reducción de la mente a un mecanismo). ¿Pero podemos decir que «pensar es calcular»?

- La misma palabra francesa «esprit» designa tanto lo mental, la cognición, es decir, el *mind*¹, como el principio mismo del ser sabio, el *pneuma* o *spirit*². Para complicar las cosas, la mente en su primer significado (*mind*) puede designar ya sea el operador (el sistema de procesamiento), ya sean las operaciones (la implementación de las reglas de inferencia), o bien el resultado (el contenido) de estas operaciones (el conocimiento).
- Para las ciencias cognitivas, la mente se identifica con lo mental, en principio, reducible a la digitalización. ¿Deberíamos entonces considerar que ciertas formas complejas de digitalización podrían acceder a la mente? ¿O hay una forma de mente que es irreducible a lo mental, en sí misma irreducible a la digitalización? Por supuesto, los filósofos responden que es importante escuchar aquí, en la medida en que aceptan las preguntas de los científicos de la IA (esto es parte del actual proyecto NHNAI dirigido por la UCLy³ con otras cuatro universidades católicas de la FUCE).

1 [NdT] En inglés en el artículo, trad. *la mente*

2 [NdT] En inglés en el artículo, trad. *el espíritu*

3 [NdT] UCLy : Université Catholique de Lyon



La «naturalización de la mente humana» en la ciencia actual procede de una triple reducción: reducción de la mente a la cognición, reducción de la cognición al cálculo, reducción del cálculo a un mecanismo

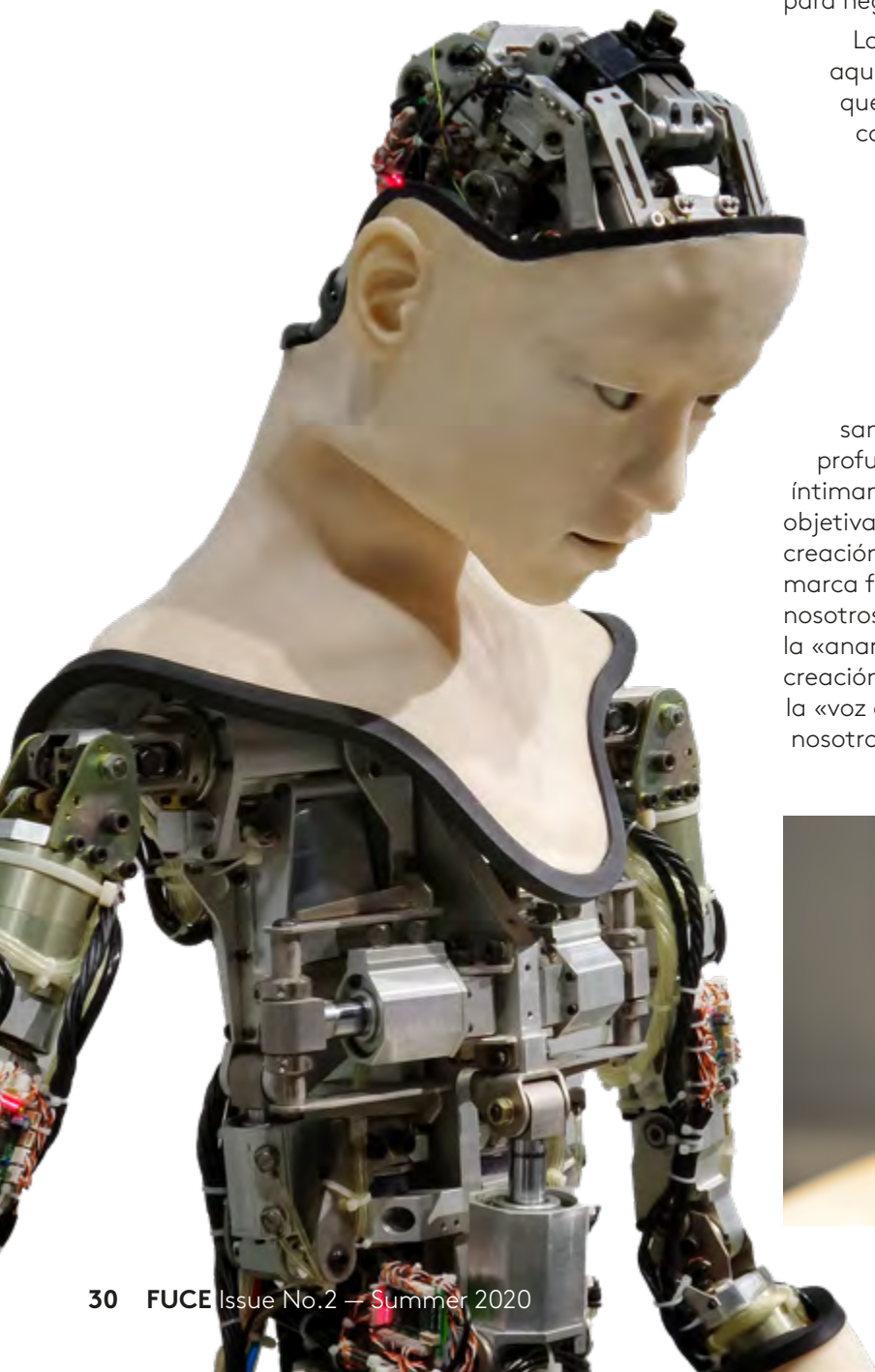
Reflexión cristiana sobre la conciencia en relación con la IA

Teniendo en cuenta los diferentes niveles de conciencia presentados al principio de este artículo, la Iglesia Católica evoca la conciencia humana como el «santuario interior» donde cada persona debe decidir sobre su acción ante Dios. El apóstol San Pablo retoma del estoicismo la noción de *sindéresis* (Rm 2, 14-16): todo ser humano oye en su interior una voz que le dice: «Haz esto, evita aquello» y se muestra digno de sí mismo si actúa o se abstiene de actuar, no cediendo a una coacción, ya sea física o moral o cultural, sino reconociendo esta voz y tratando de corresponder a lo que le indica. Tal comprensión de la interioridad de la libertad humana impregna toda la tradición cristiana; se sintetiza en la Constitución Pastoral del Concilio Vaticano II *Gaudium et Spes* (GS 16). La tradición cristiana la combina constantemente con la capacidad del ser humano para volverse ciego ante el mal o el bien o para negarse a sí mismo lo mejor.

La realidad de la conciencia que se discute aquí debe ser aclarada. En la medida en que se diferencia de la inconsciencia, la conciencia es ante todo el conocimiento inmediato por parte del sujeto de su propia actividad psíquica, la capacidad de distinguir entre lo que ocurre en él y lo que no ocurre en él.

Este estado de conciencia permite al sujeto juzgar para regular su conducta y actuar en primera persona («Yo hice esto»).

La conciencia, entendida como un santuario interior, es una realidad más profunda y personal. Tiene dos niveles, íntimamente ligados: la *sindéresis*, la dimensión objetiva de la conciencia, la marca de nuestra creación a imagen de Dios, donde se encuentra la marca fundamental del bien y del mal, inscrita en nosotros. Está en lo íntimo de la libertad humana: la «anamnesis» (que permite el recuerdo) de la creación de uno a imagen de Dios. También es la «voz de la conciencia» que resuena dentro de nosotros, más allá de las opiniones y las pasiones.



El juicio de conciencia que hacemos en respuesta a esta voz interior presupone un trabajo de apropiación de la distinción entre el bien y el mal y de aplicación a cada situación concreta. Este nivel de conciencia requiere una educación constante, un trabajo de reflexión atento para evitar perder la agudeza de juicio.

Si las neurociencias trabajan sobre el *Mind*, si la IA puede (y podrá) simular progresivamente muchos aspectos de ella, es el paso del *Mind* al *Spirit* lo que debe indicarse aquí como esencial a la noción cristiana de una conciencia iluminada, iluminada por el Amor de Dios.

Este Amor se convirtió en Palabra, Verbo, Cristo encarnado. En la meditación conocida como "de plena conciencia" (*Mindfulness*), desde la cual los neurocientíficos trabajan hoy en día, estamos precisamente a nivel *del Mind*, incluso si hay una posible apertura al espíritu, finura del alma. De hecho, en la tradición cristiana, es la Palabra que actúa en la unión del alma y el espíritu (cf. Hebreos 4:12-13: *Hermanos, la palabra de Dios es viva y eficaz, más tajante que espada de doble filo; penetra hasta el punto donde se dividen alma y espíritu, coyunturas y tuétanos; juzga los deseos e intenciones del corazón*). Esta Palabra de amor pascual permite que el Espíritu hable con nuestro espíritu. Esto es cierto para una persona, para una comunidad, para un pueblo que está liderando a toda la humanidad. Y es esta Palabra la que Personaliza, porque el único silencio interior del *Mindfulness*, por muy beneficioso que sea, no es suficiente para escuchar un «Tú» que hace surgir el «Yo» y constituye realmente el «Nosotros».

Algunos piensan que la idea de la trascendencia ha brotado en el *Mind* humano por selección natural como la mejor defensa contra la angustia de la muerte. Esto es posible. Pero la Palabra y su acción ayudan a pasar de la idea de la trascendencia a la experiencia de la revelación. Tomás de Aquino dijo que el hombre es «capaz de Dios», no sólo de pensarlo sino también de recibirlo. Blaise Pascal dijo que es capaz de infinito y que se convierte en sí mismo en la experiencia de Ágape. El hombre está «atravesado por el infinito», «el hombre pasa infinitamente a través del hombre», añadió; tiene una capacidad de apertura a la Fuente y la experiencia de lo indecible. Lo indecible no puede

ser calculado. Zundel añadirá que precisamente porque hay en el hombre esta capacidad infinita de Dios, esta posible transparencia, que es la condición misma de la revelación de Dios en el hombre, precisamente porque es este abismo de grandeza, por lo que es necesario acercarse al hombre como uno se acerca al santuario de la divinidad. ¿No es aquí donde nos acercamos a lo propio de la conciencia del hombre que ningún cálculo puede alcanzar?

A modo de conclusión

Zundel dijo que cuando el hombre viene al mundo, es ante todo un «yo prefabricado». Y añadió que, si las raíces biológicas del ser humano lo siguen, las raíces de la persona humana la preceden. El humano se convierte en una persona misma cuando pasa del «yo prefabricado» al «yo oblato», cuando se entrega a los demás en conciencia, gratuitamente. Y esto amplía e ilumina su conciencia, como dice la tradición cristiana. La neurociencia y la IA analizan el «yo prefabricado» que intentan comprender y simular, para superar en ciertas tareas con las llamadas máquinas inteligentes.



Pero, ¿puede el «yo» realmente producirse en esta supuesta mejora del «yo» prefabricado, desde la perspectiva del «pensar es calcular»? No lo creemos. Para que esto suceda, el «yo» y el «nosotros» están como esperando esta indispensable "amorización", que se recibe personal y colectivamente. La experiencia del Verbo, del Ágape, revela así la irrupción del «yo», como vivió tan fuertemente Blaise Pascal en la última parte de su vida. La alegría de ser que viene después de tal experiencia es la expresión de una gratitud que ningún cálculo puede contener o proporcionar, una gratitud a través de la cual el «yo» y el «nosotros» se unen, la conciencia personal y la conciencia colectiva en el mismo movimiento de crecimiento alimentado por los gestos de amor del más pequeño de entre nosotros.

Prof. Thierry Magnin

COULD ARTIFICIAL INTELLIGENCE ALLOW MACHINES TO BE CONSCIOUS?

Thierry Magnin





"We know how to make machines that can fix their attention or are responsive, but is that the same thing as our consciousness?"

Introduction

Artificial intelligence (AI) is a set of high-performance digital techniques that allow for the processing of very large amounts of data that a human being alone could not process. For example, the use of AI in medical imaging and its analysis is already relevant for the detection of the early stages of melanoma in order to treat it as quickly as possible. There are many more such examples in the fields of health, insurance, economics, and transport, just to name a few. AI also raises many ethical questions, among which we can note the issue of the transparency of the algorithms used. For example, those used in risk forecasting in the insurance sector, or the question of replacing humans with "intelligent robots" in certain jobs, or the transformation of certain professions such as doctors within the healthcare system. However, AI raises another question which is at once ethical and more broadly anthropological: could intelligent machines have consciousness, as some believe? With a view to copying, or even one day improving, the human brain, which neuroscientists are studying and which AI seeks to simulate, will a form of "artificial consciousness" appear? What does the word consciousness mean for a machine? What possible relationship could it have with human consciousness?

Faced with these vast questions, which some refuse to entertain (a machine can't be conscious!), it is important to try out some different avenues of reflection. This is the purpose of this modest essay. In our Catholic universities, we present our students with key elements of Christian anthropology. What relevance does this have for the question of the relationships between human consciousness and a possible machine consciousness? It is advisable to help our students develop a healthy relationship with the "intelligent machines" that they already use and with those that they will use in the future in exercising their professions.



Conscious Intelligent Machines – A Possibility ?

Among neuroscientists, different levels of consciousness are under consideration, without forgetting the role of the cognitive unconscious:

- Consciousness refers first of all to the subject's intuition (pure feeling) of her own subjective experience, independent of any reflexive knowledge. We speak here of primary consciousness (Edelman, 1992), core consciousness (Damasio, 1995), and phenomenal consciousness (Ned Block, 1980).
- In its second sense, consciousness expresses the knowledge that the subject has of this subjective experience: thought, feeling, perception, dreaming, and reasoning. Don't we say that one loses consciousness when one faints? This second dimension is referred to as secondary or higher order consciousness (Edelman), extended consciousness (Damasio), or access consciousness (Ned Block). Its objective study supposes the taking into account of the testimonies of the subjects and thus, resorts to introspection.
- Finally, consciousness designates the consciousness of the self in its relation to the other and refers to the ultimate meaning of action when it is a question of moral consciousness. Normativity is a necessary dimension of this moral consciousness as it is expressed in ethical judgement. This is a reality that goes far beyond the scope of the natural sciences, although evolutionary psychology and neuroethics now claim to provide a purely naturalistic justification of moral values. As we know, we are talking about the ethics of neuroscience, but also about the neuroscience of ethics!

The subject of a possible "machine consciousness" in AI is the subject of many controversies debated with the general public, as in the article in the magazine *Les Echos* in its issue from 26 February, 2018.

It was in 1950 that Alan Turing raised the question, in an article in the magazine *Mind*, of whether a machine can "think". He introduced the test which now bears his name, the "imitation game". In 1956, two American researchers, John McCarthy and Marvin Minsky, used the term "artificial intelligence" for the first time and organised a conference on the subject. In 1957, the Perceptron, designed by the American psychologist Frank Rosenblatt, was the first software capable of learning. It recognised the letters of the alphabet. In 1997 the computer Deep Blue (IBM), defeated world champion Garry Kasparov in chess. In 2016, an artificial intelligence system, AlphaGo (Google DeepMind), beat one of the best Go players in the world. Yet one may wonder: even if AI won the imitation game (Turing), would this mean that the machine thinks like we do or that it is endowed with consciousness?

"A rat has more consciousness than the best artificial intelligence (AI) systems we are capable of building"

"A rat has more consciousness than the best artificial intelligence (AI) systems we are capable of building", says Yann LeCun, director of AI research at Facebook. As an example, we can start from the way that a machine – or a person – perceives the yellow of a lemon. Either one can describe the yellow perfectly. But this doesn't tell us if the machine actually knows what it's talking about, or if it is simply behaving like a good student who recites her lessons without understanding anything.

*"We know how to make machines that can fix their attention or are responsive, but is that the same thing as our consciousness?" answers Jean-Gabriel Ganascia, researcher at the Computer Science Laboratory of the Sorbonne and author of the essay *"The Myth of Singularity"* (Seuil, 2017).*

The article in *Les Echos* concludes: whatever their field, researchers agree on one point: it's not a question of computing power. *"A quantum computer would not be more conscious", adds Pierre Uzan, Professor of Philosophy at the University of Paris Diderot and author of "Consciousness and Quantum Physics" (Vrin, 2017). He observes that this does not answer the question of the first person approach (the "I"), which seems beyond the reach of digital science.*

We can thus identify several essential points about the AI of today in an attempt to extrapolate for tomorrow, while situating AI ahead of the discoveries of neuroscience:

- The AI of today lies in the field of simulation. And there is thus a threshold between “simulating” an emotion and experiencing it. The same applies to human motivations.
- Understanding the role of motivations remains essential in the study of consciousness and the conscious choices that we make. This is what neuroscience clearly shows and what is not taken into account by today’s AI.
- Neuroscience shows that emotion, with its communicative dimension, thus leads the person experiencing it to attribute a value to things from which she makes choices in daily life. The learning machine is not yet there!
- The robot does not have a body with which to experience emotional-rational links which, according to neuroscience, are essential for the choices made by human beings. It would be tempting to turn the human body into a mere support, which confines the person to a single “mind”, seen by analogy as a computer program. This is a real challenge for anthropology!

- The “naturalization of the human mind” in science today proceeds from a threefold reduction: reduction of the mind to cognition, reduction of cognition to calculation, reduction of calculation to a mechanism (and thus reduction of the mind to a mechanism). But can we say that “thinking is calculating”?

The same word in French “*esprit*” designates both the mental, cognition, i.e. the mind, and the very principle of the knowing being, the pneuma or spirit. To complicate matters, *esprit* in its first meaning (mind) can designate either the operator (the processing system), the operations (the implementation of inference rules), or the result (the content) of these operations (the knowledge).

For the cognitive sciences, the mind (*esprit*) is identified with the mental, itself, in principle, reducible to digitization. Should we then consider that certain complex forms of digitization could access the mind? Or is there a form of mind that is irreducible to the mental, itself irreducible to digitization? Of course philosophers respond that it is important to be attentive to these points as long as they accept the questions of AI scientists (this is part of the current NHNAI project led by UCLy with four other Catholic universities in FUCE).



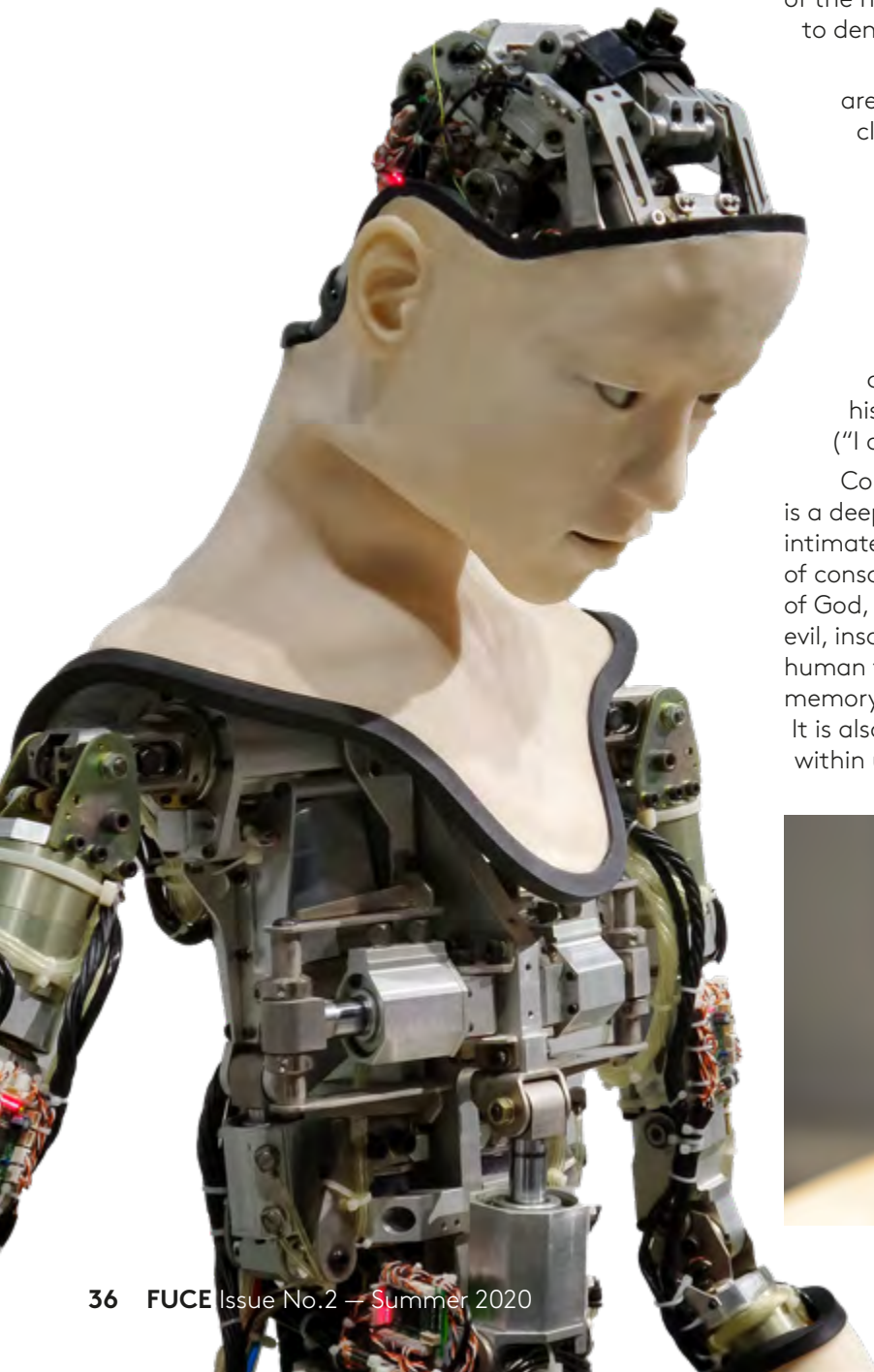
Christian Reflection on Consciousness in Relation to AI

The “naturalization of the human mind” in science today proceeds from a threefold reduction: reduction of the mind to cognition, reduction of cognition to calculation, reduction of calculation to a mechanism

All the while taking into account the different levels of consciousness presented at the beginning of this article, the Catholic Church evokes the human conscience as the “inner sanctuary” where each person must decide on his action before God. The apostle St. Paul recalls from Stoicism the notion of *synderesis* (Rm 2:14-16): every human being hears within himself a voice that says to him: “Do this, avoid that” and shows himself worthy of himself if he acts or abstains from acting, not by yielding to a constraint, whether physical or moral or cultural, but by recognizing this voice and trying to correspond to what it indicates to him. Such an understanding of the interiority of human freedom permeates the entire Christian tradition; it is synthesized in the Second Vatican Council’s Pastoral Constitution *Gaudium et Spes* (GS 16). Christian tradition constantly combines it with the capacity of the human being to be blind to good and evil or to deny himself the best.

The reality of the consciousness we are talking about here must be made clear. In so far as it is distinguished from unconsciousness, consciousness is first of all the immediate knowledge by the subject of his own psychic activity, the capacity to distinguish between what is happening inside him and what is happening outside him. This state of consciousness makes the subject capable of making judgments to regulate his conduct and to act in the first person (“I did this”).

Conscience, understood as an inner sanctuary, is a deeper, more personal reality. It has two levels, intimately linked: *synderesis*, the objective dimension of conscience, the mark of our creation in the image of God, where the fundamental mark of good and evil, inscribed in us, dwells. It is in the intimacy of human freedom, the “anamnesis” (which allows memory), with one’s creation in the image of God. It is also the “voice of conscience” that resounds within us, beyond opinions and passions. The



judgment of conscience that we make in response to this inner voice presupposes a work of appropriation of the distinction between good and evil and of application to each concrete situation. This level of consciousness requires constant education, a vigilant work of reflection to avoid losing the sharpness of judgment. If neuroscience works on the mind, if AI can (and will be able to) progressively simulate many aspects of it, it is the passage from the mind to the spirit that must be indicated here as essential to the Christian notion of enlightened consciousness, enlightened by the Love of God.

This Love became Word, Logos, Christ Incarnate. In the meditation known as Mindfulness, from which neuroscientists work today, we find ourselves only at the level of the mind, even if there is a possible opening to the spirit, the high point of the soul.

In fact, in the Christian tradition, it is the Word that acts at the junction of soul and spirit (cf. Hebrews 4:12-13: Brothers, it is alive, the Word of God, energetic and sharper than a two-edged sword; it goes to the point of separation of soul and spirit, joints and marrow; it judges the intentions and thoughts of the heart). It is this Word of paschal love that allows our spirit to let the Spirit speak to it. This is true for a person, for a community, and for a people who are leading all humanity. And it is this Word that Personalises because the mere inner silence of Mindfulness, however beneficial it may be, is not enough to hear a "You" that brings forth the "I" and really constitutes the "We".

Some believe that the idea of transcendence has arisen in the human mind by natural selection as the best defence against the anguish of death. This is possible. But the Word and its action move from the idea of transcendence to the experience of revelation. Thomas Aquinas said that man is "capable of God", not only to think of him but also to receive him! Blaise Pascal said that he is capable of infinity and that he becomes himself in the experience of Agapé. Man is "traversed by infinity", "man passes infinitely through man", he added; he has a capacity for openness to the Source and the experience of the unspeakable. The unspeakable cannot be calculated. Zundel will add that it is precisely because there is in the human being this infinite capacity for God, this possible transparency,

which is the very condition of the revelation of God in man, it is because he is this abyss of greatness, that it is necessary to approach man as one approaches the sanctuary of the divinity. Is it not here that one approaches the distinctive characteristic of human consciousness which no calculation can attain?

By Way of Conclusion

Zundel said that when man comes into the world, he is first of all a "prefabricated self". And he added that if the biological roots of the human being are behind him, the roots of the human person are in front of him. The human person becomes a person himself when he passes from the "prefabricated self" to the "oblative self", when he freely gives himself to others in consciousness. This enlarges and enlightens his consciousness, as the Christian tradition says. Neuroscience and AI work on the "prefabricated self" that they seek to understand and simulate, to overcome, for the purpose of certain tasks, with so-called intelligent machines.



But can the "I" really emerge in this supposed improvement of the prefabricated self, from the perspective of "thinking is calculating"? We don't think so. In order to emerge, it is as if the "I" and the "we" are waiting for this indispensable amorisation (de Chardin), which is received personally and collectively. The experience of the Word, of the Agapé, is thus revelatory of the irruption of the "I", as Blaise Pascal lived it so strongly in the last part of his life. The joy of being that comes after such an experience is an expression of receiving something freely given, that no calculation can contain or provide, a gift through which the "I" and the "we" come together, personal consciousness and collective consciousness in the same movement of growth nourished by the gestures of love of the least among us.

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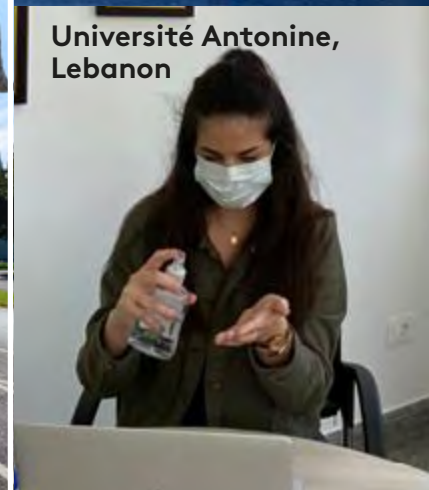
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