

# Newsletter

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*Joining academia and business for new opportunities in  
creating ERGOnomic WORK places*

## A Word from the Editor

P7 University of Coventry

### **Dear Readers, welcome to the 2<sup>nd</sup> ERGO WORK e-newsletter!**

There has been a great deal of activity in the ERGO WORK project since our first Newsletter.

The stakeholder survey was delivered (mainly online) in all partner countries, and in parallel an in-depth analysis was carried out of existing study programmes containing Ergonomics content, Universal Design, Inclusive and Accessible Design. A great deal of effort was required from all partners to assist Coventry University's task of development and translation of the stakeholder survey and curriculum investigation, disseminating the surveys to prospective participants, and working with universities to collect curriculum data. Thanks to everyone who contributed to this effort. We are pleased to announce the Work Package 2 Report was finalized in April, and Work Package 3 has already commenced. This newsletter is longer than usual because it includes a summary of findings of the report, of interest to readers of varying backgrounds.

Since our first newsletter, there have also been many dissemination activities through conferences across the partner countries – all reported below – and the group has also fully launched the ERGO WORK website. - <http://www.ergo-work.eu/>

There are also a number of exciting conference activities coming up, where the ERGO WORK project will be represented.

We just attended the two day 2nd partner meeting in Maribor, Slovenia, where we discussed progress and our next steps in the project. This involved using the findings of the initial research phase to develop ergonomics curriculum content focused specifically on creating ergonomic workplaces for people with disabilities (PWD). Ultimately, this content will be piloted in Slovenia and Poland, where the impact of the teaching will be tested in companies with working groups of students, professors, company staff and persons with disabilities.

**Wishing you an interesting read!**

**Dr Janet Saunders**  
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# ERGO WORK - Survey of stakeholder needs and Ergonomics curricula

The ERGO WORK project is focused on understanding barriers to inclusion of persons with disabilities (PWD) in the workplace, and tackling these barriers through education and collaboration between academia and industry.

The initial phase of the ERGO WORK project (work package 2) was an investigation of:

- The needs of stakeholders including individuals with and without disabilities, companies and higher educational institutions, in terms of knowledge and workplace improvements in respect to the inclusion of people with disabilities in the workplace
- The current position in each of the partner countries in relation to the teaching of ergonomics for workplace design for people with disabilities.

This investigation was carried out through an online survey in all 6 partner countries (Slovenia, Poland, UK, Italy, Spain, and Belgium) and an in-depth analysis of curricula containing Ergonomics content, focusing on curricula in the UK, Slovenia and Poland, with additional input from the other 3 partner countries.

Acceptable terminology for 'disability/ impairment' varies across the different countries. This was brought to the forefront in the stakeholder survey – the term 'person with a disability' is not considered politically correct in the UK, where many groups (including disabled people themselves) prefer the 'social model' of disability, and hence would prefer the term 'disabled people'. In the other partner countries, the social model was not so well known, and 'person with a disability' (PWD) was the preferred term, so we have used this term throughout the activities of the project and in this newsletter, as the best understood phrase across the six countries.

## Stakeholder need analysis

Stakeholder needs were gathered via an online survey, distributed throughout the networks of the 6 partner countries and completed by 520 participants across the 6 countries. The sample sizes completing the online survey differed between countries, Slovenia returning the largest number of survey completions. To prevent these differences skewing the data as a whole, the questions were analysed by country. The survey was completed by participants with, and without a disability, and there was also good representation from participants in positions of management responsibility, to provide the employer view. (There was also a paper version of the survey completed by over 1000 Polish participants, which will be reported elsewhere.)

### General points

All participants were asked how well they thought their workplace was adapted for people with disabilities. In the UK 69% of participants felt their workplace was adapted 'fairly well' or 'very well' with this figure at 53% for Poland, 51% for Slovenia, 39% for Belgium, 38% for Spain, 37% for Italy.

The most common adaptation in every country was physical adaptation to the buildings, and a general view of the data shows that most physical adaptation is perceived to have happened in the UK.

Across all countries, adaptations had also been made to jobs and the way they were carried out. The UK participants identified changes to job tasks, job role, pace and working hours, much less than stakeholders in the other countries. Interestingly, Slovenians were the most likely to identify changes to the job role and hours to suit the needs of PWD, whilst the Polish participants particularly recognized adaptations to the pace of work. Further exploration of the data and the broader context is needed to understand these differences and see where there might be practices that can be transferred between countries.

Considering adaptations for different kinds of impairment, it was not surprising to find that there was most knowledge about physical impairment, and low knowledge among all participants about hearing or visual impairment, with even less knowledge regarding mental health needs and intellectual disabilities.

### Needs of PWD

Participants with disability themselves however, do not feel well-provided for in the workplace. When asked to agree or disagree with the statement 'disabled people are not well accommodated in terms of workplace design', half or more agreed with the statement, in all countries except the UK. (Table 1 below)

Disabled participants - Disabled people are not well-provided for in terms of workplace design

	Agree Or Agree strongly	Neutral	Disagree or disagree strongly
<b>Belgium</b>	60%	20%	20%
<b>Italy</b>	67%	33%	0%
<b>Poland</b>	39%	42%	18%
<b>Slovenia</b>	55%	27%	18%
<b>Spain</b>	50%	39%	12%
<b>UK</b>	36%	33%	30%

Also, in all countries the PWD group rated their workplace lower, felt less included and were less happy at work than the non-disabled participants. (See Fig.1 below)

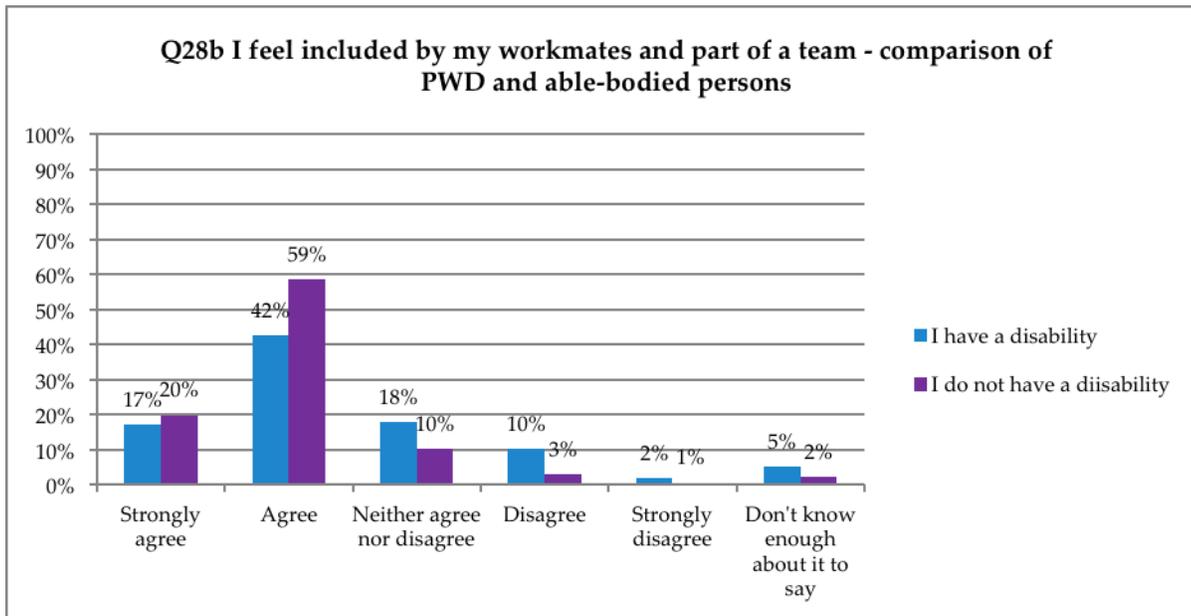


Figure 1 PWD group feel less included at work

PWD were much less confident than employers as to the adequacy of knowledge about provision and adaptation in the workplace, and PWD felt that employers need better knowledge about their obligations and the possibilities of adaptation in the workplace. PWD felt that the design of the workplace was a barrier to employment opportunities; they were less happy in the workplace than other participants and there are still perceived barriers which prevent them from asking for improvements.

These results suggest that much more work needs to be done in all countries to make workplace adaptations that suit user needs.

PWD indicated the greatest barriers to asking for improvements were fears about job security and about being stigmatized or isolated, selected by over half the respondents in all countries. Other barriers included: lack of knowledge about what adaptations were possible, difficulty of finding the right person to ask, fears about cost to the employer and worry about promotion. Relatively few participants thought there were 'no barriers' to asking.

Further differences in opinions between 'all respondents' and 'disabled respondents' indicates that many people are not aware of the issues faced by PWD, so we suggest that some awareness-raising is needed among all employees to improve the overall culture within the workplace.

There were some indications that there was a greater lack of confidence among the Polish disabled group and perhaps this indicates a greater lack of awareness and infrastructure in Polish workplaces to accommodate the needs of people with disabilities. In addition, employers in the Polish group were less confident they had the knowledge and resources to adapt workplaces and to find advice and specialised equipment.

### Needs of employers

In all countries except Poland, employers identified 'Access to funding' as the greatest barrier to making reasonable adjustment. For the Polish participants, access to funding was selected less often than other barriers – more frequently selected barriers were 'finding out a problem exists', 'finding information' and 'access to experts'. Overall however, access to funding for adaptations is clearly perceived as a major issue. If there is funding available, the message is not getting broadcast effectively in all countries.

Employers seemed less confident overall about changing the 'work process' than they did about making physical adaptations, so there is evidently a need to raise awareness in this area.

Employer participants were asked if they were interested in training for themselves, or their organisations in creating ergonomic workplaces. In most countries the majority were very interested, except in the UK, where 71% selected 'No' to training for their organisation. This different response from UK participants probably indicates the maturity and significant training and awareness activities that have already taken place in the UK, although this still leaves around 30% who would be interested in more.

All of the following options were considered by employers as useful in enabling improvements, across all countries, with only minor variations:

- Funding subsidies and information about funding;
- More information about legal requirements;
- Training for staff and management about what accommodations are possible;
- Training for staff and management about attitudes;
- Visits to see examples of best practise;
- Better links with organisations specializing in workplace design.

There are limitations to the stakeholder data as it stands. The sample is small and variable across countries and employee groups. The evidence has therefore been used cautiously to point to broad conclusions, to suggest actions that might be taken to improve Ergonomics education and to raise general awareness of a range of issues relating to PWD in the workplace in the various partner countries.

## Curricula Analysis

An in-depth analysis was carried out, of curricula containing Ergonomics content, focusing on curricula in the UK, Slovenia and Poland, with additional input from the other partner countries. The study has drawn together a summary of Ergonomics teaching from 13 HEIs, 17 faculties and 6 countries. The content of the taught courses at these institutions was explored through face to face and telephone interviews. We wanted to understand what was needed to improve training for ergonomists in tackling the needs of PWD in the workplace.

Training in Ergonomics is mostly taught at Masters Degree level. Of the partners included in this project, the UK appears to have the most mature development of Ergonomics academic training, and provides undergraduate as well as post-graduate dedicated Ergonomics awards. However, the multi-disciplinary nature of Ergonomics means that Ergonomics content is included in undergraduate and post-graduate programmes in a variety of disciplines in all the countries in this study.

Table 2 Mapping of where Ergonomic content is taught in different HEI's, faculties and countries

Degree Award	HEI	Faculties	Countries
Occupational Therapy	Coventry, Brussels, Burgos	Health & Life Sciences	UK, Belgium, Spain
Occupational Health and Ergonomics	Lublin, Siedlce	Nursing & Health Sciences, Humanities & Natural Sciences	Poland
Assistive Technology	Coventry	Health & Life Sciences	UK
Social Services Management	Urbino	Sociology	Italy
Industrial Design, Transport Design, Product Design	Coventry, Loughborough, Maribor	Design, Art & Design, Mechanical Engineering	UK, Slovenia
Human Factors and Inclusive Design	Loughborough	Design	UK
Human Factors and Ergonomics	Nottingham	Mechanical Materials and Manufacturing Engineering	UK
Organisational Sciences, management and work systems	Maribor, Wroclaw	Organisational Sciences, Chemistry, Informatics and Management	Slovenia, Poland
Work and Organisational Psychology	Brussels	Psychology & Education Sciences	Belgium
Inclusive Pedagogy , inclusion in Education, Special Education	Koper, Maribor, Siedlce, Cantabria	Education, Humanities	Slovenia, Poland, Spain
Production Ergonomics Textile Design, Mechanical Engineering	Maribor	Mechanical Engineering	Slovenia
Work Safety and Ergonomics	Wroclaw	Chemistry, Informatics	Poland

The table indicates the variety of disciplines within which Ergonomics content is taught. The taught content itself is likely to depend very much on the bias within the faculty where Ergonomics is situated.

When asked 'Are the needs of persons with a disability taught?', the dedicated Ergonomics or Human Factors awards were able to answer 'Yes', as also were some specific components such as 'MSc in Assistive Technology' (UK, Coventry, in Health & Life Sciences Faculty); 'Disability, ageing and inclusive design' (UK, Loughborough, part of Design Ergonomics); and Special Education Pedagogy components (Slovenia, Koper, Education Faculty). However, these are the minority and for the less dedicated curriculum components, the answer to this question was more likely to be 'Partly' or 'No'.

Where the approach is one of 'Inclusive Design', the approach and language are focused on raising students' awareness to the huge range of human capability and encouraging them to use appropriate methods to capture universal needs and design in such a way that ensures no groups will be excluded, but specific focus on PWD or the workplace is absent, unless students carry out detailed project work in this area.

### What needs to be included in respect to the needs of PWD in the workplace?

The study aimed to determine what a future curriculum should include in terms of the needs of PWD in the workplace. There are a range of subject areas that might be relevant, and they may be drawn from both within, and outside of ergonomics as it is currently taught within the surveyed institutions.

The following are competencies related to Ergonomics that have been identified by the Institute of Ergonomics and Human Factors in the UK:

- Human physical and cognitive characteristics;
- Ergonomics methods and research methods, qualitative and quantitative;
- Product design, with elements such as participatory or user-centred design;
- Evaluation;
- Systems design, an awareness of systems approach;
- Work process design and work design, such as pacing and hours;
- Health & safety;
- Well-being (at work);
- Efficiency and effectiveness;
- Workplace interventions;
- Legislation and standards;
- Ethics.

These topics are generic, and would require tailoring specifically to issues regarding PWD.

Our conclusion is that to improve training in Ergonomics for the needs of PWD in the workplace, existing Ergonomics teaching would need greater tailoring to the specific needs of PWD. Our investigations identified additional content that is specifically targeted at understanding and designing for PWD needs and this includes:

- Inclusive design – ageing, different abilities, range of capabilities;
- Empathic methods of design to raise awareness of students;
- Some understanding of organisational behaviour;
- Assistive technology knowledge;
- Accessible environments knowledge;
- Share knowledge about tools for inclusive design;
- Include more knowledge about mental health needs – generally this area is neglected;
- Focus on workplace interventions and PWD needs;
- Incorporate knowledge from the 'Occupational Health' field and/ or consider interdisciplinary cooperation;

Teaching empathic skills can be achieved through practical work, for example students using items such as a wheelchair, macular degeneration glasses, a 'third age' suit to simulate a disability, or age-related impairments such as visual, hearing, mobility, grip and coordination. The use of case studies and personas can also enhance students' empathic skills and appreciation of the needs of disabled people. Another approach to teaching empathic skills is by direct contact with disabled people. This is an essential part of good practise in inclusive design and Occupational Therapy content, such that students will interact with disabled people as part of training in participatory design or co-design; talk to them to understand their needs in a number of areas; and be taught ethnographic research methods such as shadowing participants.

## Conclusions and Next Steps

The data presented here has shown a variable picture across the 6 European countries surveyed in terms of the adaptations made for people with disabilities and the taught content available to ergonomics students. There is a need for better European collaboration and transfer of knowledge and practice in this area.

The next stage of work will involve application of the findings to the development of ergonomics curriculum content focused specifically on creating ergonomic workplaces for PWD.

The project as a whole aims to create supplementary modules that can be used to update existing Ergonomics teaching contents. It will then test and implement the impact of the teaching in companies within 4 multidisciplinary working groups of students, professors, company staff and targeted persons with disabilities.



Figure 2. Macular degeneration simulation glasses



Figure 3. Gerontologic Age Suit

# Activity Reports

## Slovenia: ERGO WORK Partnership meeting 2 in Maribor, 22-23 May 2014:

The 2nd partnership meeting was held in Maribor, Slovenia, the originating country for three of the partners, including the coordinator.

The aim of the meeting was:

- To evaluate the content of the five curriculum supplementary modules;
- To set the conditions for innovative pilot projects at companies (definition of target groups, selection of targeted products and work places, persons with disabilities and students involved in the working multidisciplinary groups etc.);
- To plan the implementation of the innovative pilot projects;
- To plan further dissemination, promotion and evaluation activities.

## Slovenia: ERGO WORK at "22nd Educational Days in Portorož" on the topic of "Challenges for PWDs when entering the labour market" (8th April 2014)



The ERGO WORK project was introduced by members of the project group from the University of Maribor at a conference in Portorož on 8 April 2014, in the context of the 22nd Educational Days entitled 'Challenges for Persons with Disabilities when Entering the Labour Market'. The conference was organized by the Slovene Society of Special Education and Rehabilitation Teachers: a group of organizations for the education of persons with special needs in Slovenia. A summary "Ergo Work – design of inclusive and accessible workplaces" and the PowerPoint presentation are available at:

<http://www.drustvo-srp.si/component/content/article/8-aktualno/77-izbrano-gradivo-id-2014>

## Poland: Meetings with Business: Business Challenges, Siedlce, 13th March 2014

Meetings with Business is an International Conference and Workshop organized annually (sixth edition) by the Faculty of Economic and Legal Sciences of the University of Natural Sciences and Humanities in Siedlce, Poland, in collaboration with the Eastern Chamber of Commerce. Its goal is to bridge the gap between theory and practice. Over 100 participants took part this year, among them business people and academics from Polish and foreign universities. The ERGO WORK project was presented in the context of modern business challenges. All three Polish partners (University, Łuksja and Medical and Diagnostic Centre) took part as well as a representative of the University of Maribor (Prof. Vojko Potočan).

More about Meetings with Business: <http://www.wnep.uph.edu.pl>

## Spain: XXI International Conference on Integration and Social Inclusion, Badajoz, November 2013

The INFAD Psychological Association with the Department of Psychology and Anthropology, University of Extremadura, held the XXI International Conference on Integration and Social Inclusion in the Faculty of Education, Badajoz, on days 19, 20 and 21 November 2013. The President of INFAD, Mr. Florencio Vicente, presented in detail the **ERGO WORK** programme, in a context in which innovative solutions in the field of integration and social inclusion of people with disabilities were addressed.

More about the conference: <http://www.infad.eu/?p=859>

## Spain: Gerontology and Disability Congress held in Zamora, February 2014

The Active and Healthy Ageing Congress held in Zamora (Spain), from 12-14 February 2014, and organized by the Spanish partner INFAD, was a resounding success. More than two hundred professionals of gerontology and disability attended the Congress and its impact on national media was very high. The ERGO WORK project was announced many times, attracting the attention of many attendees.

In conclusion, the Congress approved THE TEN COMMANDMENTS OF BEST PRACTICES ON AGEING AND DISABILITY, a collection of key points to regulate the development of active policies in this area. The 'Ten commandments' are as follows:

### **"Zamora Statement on disability, active, healthy and positive aging"**

<b>1. Overcoming the existential divide</b>	Respecting the dignity of the human being and their personality up to the end of life.
<b>2. Overcoming the social divide</b>	Providing to elderly and disabled people, leadership patterns, social participation and decision making as a strategy to combat stereotypes.
<b>3. Overcoming the education gap.</b>	Promoting lifelong learning
<b>4. Overcoming the knowledge gap.</b>	Implementing research and innovation processes, in which economic agents (relating to the third sector companies), research, development and innovation, explore new ways to optimize the individual and ecological development of elderly people.
<b>5. Overcoming the social contributions gap.</b>	Encouraging the involvement of elderly people and disabled people in every social challenge, both in the fields of entrepreneurship and social innovation.
<b>6. Bridging the gap in health conditions.</b>	Promoting healthy lifestyles to develop self-reliance and personal self-care as well as behaviours in health promotion, personal autonomy and well-being.

<b>7. Overcoming the generational digital divide.</b>	Improving adaptability of ICTs as a key potential of the elderly and people with disabilities' needs, including the development of a prototype focused on the users.
<b>8. Bridging the gap between the workforce and retirement.</b>	Making retirement more flexible, based on labour demand and job performance criteria.
<b>9. Bridging the gap of geographical location.</b>	Activating social, familial and community support systems to avoid any type of isolation, especially in rural areas.
<b>10. Bridging the gap of social inequality.</b>	Prioritizing attention to the most vulnerable groups, such as people with disabilities or psychosocial risk in order to prevent frailty and dependence.

More about the congress: <http://www.xcongresodepsicogerontologia.com/>



Figure 5: Florencio Vicente, INFAD President

### Spain: XXI Congress on Psychology, Badajoz, April 2014

The VII Congress on Psychology and Education and XXI INFAD Congress were held in Badajoz, from 9 and 12 April 2014, with participation from close to 700 persons (attendees and speakers). The Organizing Committee has highlighted the success of the Congress, as well as the Symposium on Disability and Active and Healthy Ageing presented by G21 group, where the project ERGO WORK was discussed in detail. The level of impact exceeded all expectations both in national and international media communication. INFAD President, Florencio Vicente has received congratulations from several agencies and public and private stakeholders, including representatives from the EU.



Figure 6: Professor Ms. Ana Isabel Sánchez. Symposium Coordinator.

### Symposium on Disability and Aging.

As part of the Congress, the G21 group presented an International Symposium on Disability and Aging, under the coordination of Professor Ana Isabel Sánchez. Part of the symposium addressed the Ergo Work project. The scientific community welcomed this initiative favourably. It was attended by professors as José Antonio del Barrio, Maria Isabel Fajardo, Antonio Sánchez Cabaco, Alfredo Jimenez Gonzalez and Carmen Jerónimo Palmero.

More: <http://vimeo.com/92143593> and <http://www.viicongresopsicologiayeducacion.com/es/video-de-presentacion/>

## Upcoming Meetings / Events

### **SEMINAR ON COGNITION AND APPLIED ERGONOMICS, Pontificia University of Salamanca, Spain 3-4 July 2014**

On July 3-4, the Pontificia University of Salamanca will host the first SEMINAR ON COGNITION AND APPLIED ERGONOMICS, as part of the Summer University 2014 with ERGO WORK researchers as main speakers.

The seminar objective is to develop an international forum for the dissemination and exchange of scientific information on applied theoretical areas of Ergonomics. In particular the concept of triple alliance and its impact on the business, academic and social context is underlined.

The seminar director is Mr. Antonio Sánchez Cabaco, Cognitive Psychology Professor and Ergo Work researcher.

### **ERGONOMICS SUMMER COURSES – University of Cantabria 7-10 July 2014, and University of Burgos, July 2014**

The University of Cantabria will release the ERGO WORK project through summer courses, particularly within the framework of the course entitled “ADVANCE ON DISABILITY INTERVENTION” to be held from 7-10 July 2014, under the coordination of Professor José Antonio del Barrio, ERGO WORK researcher too.

Moreover, the University of Burgos will also present a monographic conference on Ergonomics and Ergo Work project as part of the summer course, also this July 2014. The director of this event is Professor Jerónimo González, also an ERGO WORK researcher. Another ERGO WORK project researcher, Professor Alfredo Jimenez, is also ascribed to this University.

### **AHFE 2014 - 5th International Conference on Applied Human Factors and Ergonomics, Krakow, Poland on 19-23 July 2014, ERGO WORK paper to be presented**

A paper about preliminary results of the ERGO WORK project will be presented at AHFE 2014 - 5th International Conference on Applied Human Factors and Ergonomics held in Krakow, Poland on 19-23 July 2014, written by partners in Poland, UK and Slovenia.

‘ERGO WORK - Creating the best places to work’, G. O’Sullivan, Poland, L. Moody and J. Saunders, UK, A. Curin and M. Leber, Slovenia. <http://www.ahfe2014.org>

### **INFAD WILL PUBLISH A MONOGRAPH ON ERGONOMICS.**

INFAD’s President, Mr. Florencio Vicente, has announced the upcoming publication of a special issue about ergonomics in the scientific journal “International Journal of Developmental and Educational Psychology, INFAD: Revista de Psicología”. The aim is to collect and disseminate all the advances which are taking place in the field of ergonomics, including the development of the ERGO WORK project. Experts in this field will be invited to participate, as well as researchers and participants of ERGO WORK. <http://infad.eu/RevistaINFAD/>

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