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Number of Papers Included in these Proceedings per Country

(The country of the first author was the one taken into account for these statistics)

Country	# Papers	%
Total	**123**	**100.00**
United States	18	14.63
Japan	16	13.01
Brazil	9	7.32
Czech Republic	9	7.32
Latvia	9	7.32
Mexico	8	6.50
Taiwan	7	5.69
China	4	3.25
Italy	4	3.25
Russian Federation	4	3.25
Ecuador	3	2.44
Turkey	3	2.44
United Arab Emirates	3	2.44
Chile	2	1.63
Germany	2	1.63
India	2	1.63
Spain	2	1.63
United Kingdom	2	1.63
Australia	1	0.81
Austria	1	0.81
Bangladesh	1	0.81
Belgium	1	0.81
Croatia	1	0.81
Estonia	1	0.81
Finland	1	0.81
Guatemala	1	0.81
Pakistan	1	0.81
Peru	1	0.81
Saudi Arabia	1	0.81
Slovakia	1	0.81
South Africa	1	0.81
South Korea	1	0.81
Sweden	1	0.81
Thailand	1	0.81

Foreword

Our purpose in the 21st World Multi-Conference on Systemics, Cybernetics and Informatics (WMSCI 2017) is to provide, in these increasingly related areas, a ***multi-disciplinary forum, to foster interdisciplinary communication*** among the participants, and to support the sharing process of diverse perspectives of the same transdisciplinary concepts and principles.

Systemics, Cybernetics and Informatics (SCI) are being increasingly related to each other in almost every scientific discipline and human activity. Their common transdisciplinarity characterizes and communicates them, generating strong relations among them and with other disciplines. They work together to create a whole new way of thinking and practice. This phenomenon persuaded the Organizing Committee to structure WMSCI 2017 as a multi-conference where participants may focus on one area, or on one discipline, while allowing them the possibility of attending conferences from other areas or disciplines. This systemic approach stimulates cross-fertilization among different disciplines, inspiring scholars, originating new hypothesis, supporting production of innovations and generating analogies; which is, after all, one of the very basic principles of the systems' movement and a fundamental aim in cybernetics.

WMSCI 2017 was organized and sponsored by the International Institute of Informatics and Systemics (IIIS, www.iiis.org), member of the International Federation of Systems Research (IFSR). The IIIS is a ***multi-disciplinary organization for inter-disciplinary communication and integration***, which includes about 4000 members. Consequently, a main purpose of the IIIS is to foster knowledge integration processes, interdisciplinary communication, and integration of academic activities. Based on 1) the transdisciplinarity of the systemic approach, along with its essential characteristic of emphasizing *relationships* and *integrating* processes, and 2) the multi-disciplinary support of cybernetics' and informatics' concepts, notions, theories, technologies, and tools, the IIIS has been organizing multi-disciplinary conferences as a platform for fostering inter-disciplinary communication and knowledge integration processes.

Multi-disciplinary conferences are organized by the IIIS as support for ***both intra-*** and ***inter-disciplinary*** communication. Processes of intra-disciplinary communication are mainly achieved via traditional paper presentations in corresponding disciplines, while conversational sessions, regarding trans- and inter-disciplinary topics, are among the means used for inter-disciplinary communication. Intra- and inter-disciplinary communications might generate *co-regulative cybernetic loops*, via negative feedback, and *synergic* relationships, via positive feedback loops, in which both kinds of communications could increase their respective effectiveness. Figure 1 shows at least two cybernetic loops if intra- and inter-disciplinary are adequately related. A necessary condition for the effectiveness of Inter-disciplinary communication is an adequate level of **variety** regarding the participating disciplines. *Analogical thinking and learning processes* of disciplinarians depend on it; which in turn are potential sources of the creative tension required for cross-fertilization among disciplines and the generations of new hypothesis. An extended presentation regarding this issue can be found at www.iiis.org/MainPurpose.

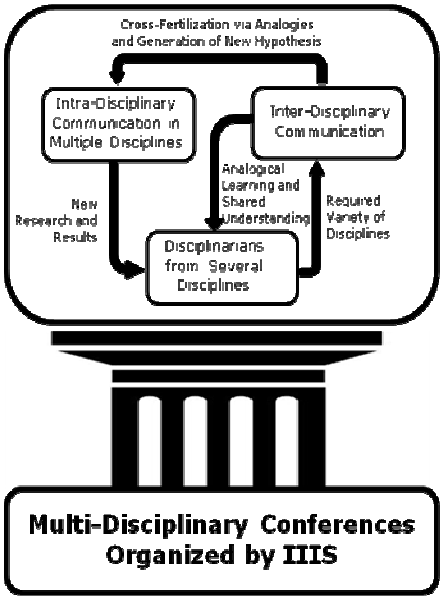

Figure 1

In the specific case of Systemics, Cybernetics and Informatics (SCI), the IIIS is an organization dedicated to contribute to the development of the Systems Approach, Cybernetics, and Informatics potential, using both: knowledge and experience, thinking and action, theory and practice, for:

a) the identification of synergetic relationships among Systemics, Cybernetics and Informatics, and between them and society;
b) the promotion of contacts among the different academic areas, through the transdisciplinarity of the systems approach;
c) the identification and implementation of communication channels among the different professions;
d) the supply of communication links between the academic and professional worlds, as well as between them and the business world, both public and private, political and cultural;
e) the stimulus for the creation of integrative arrangements at different levels of society, as well as at the family and personal levels,
f) the promotion of transdisciplinary research, both on theoretical issues and on applications to concrete problems.

These IIIS objectives have oriented the organizational efforts of yearly WMSCI/ISAS/IMSCI/CISCI conferences since 1995.

On behalf of the Organizing Committee, I extend our heartfelt thanks to:

1. The 633 members of the different Program Committees, from 63 countries (including the PC members of the events organized in its context and jointly with WMSCI 2017). Almost all the members of the Program Committee are ***authors or co-authors sessions' best papers in previous conferences***, i.e. papers selected by the respective audience as the best paper of the session in which they were presented.

2. The 593 additional reviewers, from 77 countries, for their ***double-blind peer reviews***; and

3. The 212 reviewers, from 51 countries, for their efforts in making the ***non-blind peer* reviews**. (Some reviewers supported both: non-blind and double-blind reviewing for different submissions).

The names and affiliation of both kinds of reviewers are listed in these proceedings. We extend our gratefulness to all of them. The scholarly quality of the authors and the reviewers is what define the quality of the conference and its respective proceedings. Consequently, our gratitude is to the members of the programs committees, both kind of reviewers and the collaborating authors.

A total of 1247 reviews made by 805 reviewers, from 82 counties, (who made at least one review) contributed to the quality achieved in WMSCI 2017. This means an average of 5.20 reviews per submission (240 submissions were received). ***Each registered author had access, via the conference web site, to the reviews that recommended the acceptance of their respective submissions***. Each registered author could also get information about: 1) the average of the reviewers' evaluations according to 8 criteria, and the average of a global evaluation of his/her submission; and 2) the comments and the constructive feedback made by the reviewers, who recommended the acceptance of his/her submission, so the author would be able to improve the final version of the paper.

In the organizational process of WMSCI 2017, about 240 articles were submitted. These pre-conference proceedings include about 123 papers that were accepted for presentation from 34 countries (50 countries taking into account the presentations in collocated events). I extend our thanks to the invited sessions' organizers for collecting, reviewing, and selecting the papers that will be presented in their respective sessions. The submissions were reviewed as carefully as time permitted; it is expected that most of them will appear in a more polished and complete form in scientific journals.

This information about WMSCI 2017 is summarized in the following table, along with the other collocated events:

Conference	# of submissions received	# of reviewers that made at least one review	# of reviews made	Average of reviews per reviewer	Average of reviews per submission	# of papers included in the proceedings	% of submissions included in the proceedings
WMSCI 2017	**240**	**805**	**1247**	**1.55**	**5.20**	**123**	**51.25%**
IMSCI 2017	**105**	**402**	**850**	**2.11**	**8.10**	**42**	**40.00%**
WMSCI & IMSCI 2017	**345**	**1207**	**2097**	**1.74**	**6.08**	**165**	**47.83%**
CISCI 2017	**181**	**542**	**1305**	**2.41**	**7.21**	**71**	**39.23%**
TOTAL	**526**	**1749**	**3402**	**1.95**	**6.47**	**236**	**44.87%**

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Workshops and Conversational Sessions

Professor Thomas Marlowe, Seton Hall University, USA, Department of Mathematics and Computer Science, Program Advisor for Computer Science, Doctor in Computer Science, and Doctor in Mathematics.

Professor Shigehiro Hashimoto, Kogakuin University, Japan, Associate to the President and Dean of Admissions Center, Doctor of Engineering and Doctor of Medicine, Biomedical Engineering

Professor William Swart, East Carolina University, USA, College of Business, Former Provost and Vice Chancellor for Academic Affairs, Former Dean of Engineering at New Jersey Institute of Technology

Dr. Faith Power, Shenandoah University, USA, Visiting Professor of Entrepreneurship, Board Service: Free Medical Clinic of the NSV; Our Health; Byrd School of Business Advisory Board; Board of Trustees, Valley Health

Dr. Luis Velazquez-Araque, University of Guayaquil, Ecuador, Founder of the Aerodynamics, Laboratory at National University of Táchira, Venezuela, Visiting Professor at the Czech Technical University in Prague, Czech.

Professor Andres Tremante, Florida International University, USA, The Mechanical & Materials Engineering (MME) Department

Plenary Keynote Speakers

Professor Thomas Marlowe, Seton Hall University, USA, Department of Mathematics and Computer Science, Program Advisor for Computer Science, Doctor in Computer Science, and Doctor in Mathematics.

Professor Shigehiro Hashimoto, Kogakuin University, Japan, Associate to the President and Dean of Admissions Center, Doctor of Engineering and Doctor of Medicine, Biomedical Engineering

Professor William Swart, East Carolina University, USA, College of Business, Former Provost and Vice Chancellor for Academic Affairs, Former Dean of Engineering at New Jersey Institute of Technology

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Eng. Joseph Prezzama, MITRE Corporation, USA, Lead Communications Engineer, Leads the program in support of the Chief Information Officer (CIO) for the United States Special Operations Command (USSOCOM)

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Dr. Mario Lamanna, Evoelectronics, Italy and Selex-SI, USA, Senior Scientist

Professor Margit Scholl, Technical University of Wildau [FH], Germany, Faculty of Economics, Computer Science, Law, Business and Administrative Informatics, Received a research prize from TH Wildau.

Dr. Maria Jakubik, HAAGA-HELIA University of Applied Sciences, Finland, Hanken School of Economics, Head of Master's Degree, Programme in International Business Management (IBMA)

Dr. Anthea Fudge, University of South Australia, Course Coordinator of Science for Tertiary Learning, Blended Learning/Digital Technologies upon the Delivery of Science

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Professor Nagib C. Callaos, Ph. D.
WMSCI 2017 General Chair
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Binary Study of Disability and Mental Health Policy: A Methodological Report

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ABSTRACT

Cross-sectoral comparisons of public policies, with a small sample and in-depth approach, are still quite rare. This study explores advantages and pitfalls of binary qualitative research design in public policy by comparing mental health and disability. Those sectors are chosen within most-similar design, as quite interconnected policies that are either gone or going through transformation from "pure" health policy to broad multisectoral policy also containing diverse social, human rights, education issues, etc. Project is guided by a simple comparative question of what are similarities and differences of disability and mental health policy on European level and is based on qualitative data analysis. It uses document analysis as main data collecting method. European documents (of EU, Council of Europe, WHO and UN) within those sectors are coded by rules of Boyatzis' thematic analysis to detect main patterns / models of disability and mental health policy to be compared. Codes cover elements or features of those models: goals and objectives, instruments, target groups, problems, actors and policy-making principles. The purpose of this paper is to present transparently all methodological practices and foundations of the project to get its critical review. Therefore, paper will declare details on data gathering methods and coding procedures – on sampling, codes development and test coding.

Keywords: cross-sectoral comparison, multisectoral policies, thematic analysis, document sampling, test coding

INTRODUCTION

Paper presents a methodological report of the research project "Binary Study in Public Policy: Disability and Mental Health".[1] This binary study compares two multisectoral public policies to reveal the scope of their content. The project is developed around twofold research problem. Methodological dimension of the research problem stems from almost complete lack of cross-sectoral comparisons of public policies. Comparative public policies are the least developed in the aspect of empirical comparative research of different policies within the same jurisdiction. The empirical dimension of the research problem is connected to actual cases, as disability and mental health both belong into a group of multisectoral public policies. Thus, this project tries to capture the emergence of new and challenging type of policies that cut across several classical governmental sectors and that are based on specific social groups and identities. Two policies are compared by themes, with thematic analysis of documents at European level.

As this research is in a novel field which lacks rich tradition, and as documents are the only data source, project is based on a descriptive research question, a so called "what question". [1] What are the similarities and differences of the content of disability and mental health policy at the European level? Thus, the purpose of this comparative policy study is to describe policy content of the two European public policies, mental health and disability policy. A descriptive research purpose is coherent with the descriptive research question. The study is based on thematic analysis of fundamental policy features (goals, instruments, actors, target groups, problems, etc.) that are present in documents of international organizations at the European level (EU, WHO, UN, Council of Europe). This preliminary scanning of policy content will expectantly allow additional questions for later research, for example, where content of two policies overlaps and is compatible. Afore mentioned could be a good background for the development of the policy recommendations for these and similar multisectoral policies.

This report aims to show transparency on all methodological practices within the project to get a critical review of its methodological foundations. This will boost methodological rigor of our research conducting. For that purpose, paper will declare details on data gathering methods and coding procedures. Paper is organized within four parts. First part brings a short explanation of the theoretical and methodological background of the project. Second part explains sampling procedures in detail, what criteria were used and how the sample of mental health / disability European documents was derived. Third part describes how coding scheme was developed, explaining codes' topics and structure, and what coding units were selected. Lastly, forth part covers a pilot phase of the project, how test coding was conducted and what were the test outcomes. In conclusion, we present further steps in the project implementation.

[1] We thank Marie-Hélène Paré for the methodological inspiration for this project.

THEORETICAL AND METHODOLOGICAL BACKGROUND

Mental health and disability policy are peculiar policies. Both policies are gathered around specific social groups, people with disability or mental disorder, who need specific support systems and develop specific group identities. Statistics show that disability and mental health are both on a rise. Mental illness accounts for 26.6% of total ill-health and is associated with a three-fold increase in the number of work days lost compared to not having a mental illness over the past 12 months. [2] 38.2 percent of the EU's population, or about 165 million people in Europe, suffers from a mental disorder. [3] *World Report on Disability* stresses that more than one billion people, about 15% of world's population, has some form of disability, which makes a significant raise since in 1970s estimations were on about 10%. [4] Families are more and more included into target group of the two policies, and specific social environments, as the schools or workplaces, are also affected. Both broadens a policy target population severely. In some dimensions, for example in the questions of anti-stigmatization, both policies enlarge their target group onto whole population.

Additional important characteristic of these policies is that both cut-across several traditional governmental sectors. Both have been health care issues from the start but today also include public health, education, human rights, social care, labor market, etc. They are becoming more and more multisectoral which may constitute a new type of policies. Contemporary mental health combines five basic aspects: promotion of mental health, prevention of mental disorders, treatment and rehabilitation of people with mental disorders, dealing with consequences of the mental disorder existence through social policies, and human rights issues. [5] Disability policy transforms from medical model that is occupied with health aspect of disability, treatment, rehabilitation and social care, to social and human rights model, which are focused on empowerment, equity and inclusion, through adding new sectors as antidiscrimination, education, transportation, etc., into the disability field. [6]

Still, huge similarities among disability and mental health field were never systematically analyzed that would allow their comparison within the field of comparative public policy. Comparative public policies are interested into policy variations, of some sector across borders within different jurisdictions (mostly cross-national comparative public policies) or of several sectors within same jurisdiction (cross-sectoral comparative public policies). [7] Latter is much less developed even though this kind of endeavor could bring tremendous insight on policy-making. Cross-sectoral comparisons of public policies are quite often built on classifications of policy sectors, whether in typologies or taxonomies. Policy typology of Theodore Lowi is the most famous one in the field.[2] [9] Two solid taxonomies of all basic national policy sectors are classification on policy areas in a book edited by Hugh Compston, developed by comparing France, Germany and Great Britain, and classification that makes a foundation of *Comparative Agendas Project*, longitudinal quantitative policy research, initiated by Baumgartner and Jones. [10] Policy classifications are set on the comparison of a large number of sectors. This line of work is still quite underdeveloped. Additionally, some scholars completely doubt that reliable policy classifications are achievable, as policies are to complex phenomena to be classified by several criteria or dimensions. [11]

However, the least research efforts are put into cross-sectoral comparisons with a small sample of policies as cases. Those kinds of studies are almost none existing in the field of public policy and still more prone in comparative politics within the comparative technique of focused comparisons. Focused comparisons are based on few cases and most often those are paired or binary comparisons and three or triangular comparisons.[3] [12] Focused comparisons offer a richness of insight. "Like case studies, they remain sensitive to the details of particular countries and policies but in addition they demand the intellectual discipline inherent in the comparative enterprise... it is virtually impossible to deliver an uninteresting report using focused comparison". [13] Binary studies or paired comparisons that are often used in comparative politics, but rarely theorized, are "distinct from both single-case studies and multicase analysis". [14] They are different from multiple case studies as they are equally focused on comparing as on cases. With a most similar or most different design, those kinds of studies are best suited for qualitative data analysis.

Selected method of analysis in this binary study of two multisectoral public policies is thematic analysis, developed by Boyatzis. "Thematic analysis is a process for encoding qualitative information". [15] In this process of analysis, three phases of inquiry are included. First, there's recognizing an element that is important for the understanding of the meaning of selected empirical material. Then encoding follows as a phase of observing selected element as something specific. Both precede the third phase of interpretation. Explicit codes and codebook or coding scheme are required to reveal themes within empirical material, to travel throughout this sequence of phases. Themes are patterns "found in the information that at minimum describes and organizes the possible observation and at maximum interprets aspects of the phenomenon". [16] Patterns can be quantitative, verbal or visual. [17] One of the most important aspects of thematic analysis is that it demands qualitative empirical research to be highly transparent and systematic in all the phases of inquiry, in the sampling, code development and the analysis.

SAMPLING

Document selection in this project followed four basic criteria. First criterion defined scope of the documents in the sample. Only central, core documents in each field are included. Mental health and disability are affected by broad range of documents from diverse specialization (e.g. human rights documents, health care documents, social policy documents, etc.), but including everything would make sample huge and unmanageable. Therefore, only documents that directly mention mental health or disability in the title are included. Second criterion determines time range of selected documents. As the idea of the research question is to scrutinize current policy content, all selected documents are published after 2000. The policy changes usually appear in 10 to 20 years, and thus this time range captures last wave of change in each area. Not everything after 2000 is included, as newest documents are the most relevant ones.

Organization origin of documents is a third selection criterion. Sample gathers relevant European documents, as this represents the most developed model of both policies in the world. We gathered documents produced by European Union (the most important policy maker on the European level), World Health Organization, especially WHO European office (most important "topical" organization for chosen policies), United Nations, Council of Europe, and Organization for Economic Cooperation and Development (OECD). In the end, no OECD documents were selected as this organization mostly produces studies and analytical papers on chosen policies. Furthermore, OECD is focused on more narrow topics, e.g. students with disabilities or

[2] Lowi's policy classification work would probably be best described also as taxonomy. [8]

[3] Of course, focused comparisons in comparative politics are primarily designed to compare across countries, cross-nationally.

mental health in the workplace, and not selected policies in general.

Last, fourth criterion determines the type of the documents selected for the sample. Crucial policy-shaping documents are included in the sample, those that contain proscription of policy goals, instruments, etc, and which are central "political documents" (the so called "political will"). Thus, sample primarily gathers strategies, action plans and programs. All other types of documents, as resolutions, decisions, reports, directives, communications, books / publications, evaluations, etc, were excluded. Therefore, policy relevance of the documents is primarily evaluated by the document type.

Still, some organizations did not yet prepare a strategy or an action plan for chosen policies. Web pages of different key organizations were analyzed and consulted to capture their activity on both policies. Web pages contain descriptions of the two policy areas where organizations usually mention and stress central documents. Lack of strategies and action plans resulted in including some other types of documents in the sample to gather relevant recent policy activity from international organizations on the European level. EU is a crucial policy maker in disability policy. EU disability policy is quite developed, as it started before 2000, and now it is in a third phase in the post-2000 period. Crucial policy maker in the mental health field on the European level is WHO. All other organizations, including the EU, Council of Europe and UN, are invoking WHO documents in mental health area. In the mental health field, EU is still in the pre-strategy phase. EU started with the green paper in 2005, and until now, EU still did not produce a strategy. There are two crucial documents after the green paper, as initiatives for the EU mental health strategy, so those were included in the sample.

This context being explained, we ended up with the sample of 17 documents in total, 9 documents for disability field and 8 documents for mental health field. Complete sample contains 366 pages, 188 pages form mental health and 178 pages for disability. Sample contains 8 EU documents, 5 WHO documents, 3 Council of Europe documents and 1 UN document. Documents date from 2003 to 2016. There are 8 action plans, 3 recommendations, 2 strategies, 1 program, 1 resolution, 1 green paper and 1 convention in the sample (see table 1).

Table 1: Document sample [18]

		Organization origin	Title	Year	Type of document
MENTAL HEALTH	1.	Council of Europe	*Improving the response to mental health needs in Europe*	2005	Resolution
	2.	Council of Europe	*Recommendation of the Committee of Ministers to member states concerning the protection of the human rights and dignity of persons with mental disorder*	2005	Recommendation
	3.	EU	*Green Paper. Improving the mental health of the population: Towards a strategy on mental health for the European Union*	2005	Green paper
	4.	EU	*European Pact for Mental Health and Wellbeing*	2008	Recommendation
	5.	EU	*European framework for action on mental health and wellbeing*	2016	Recommendation
	6.	WHO	*Mental Health Gap Action Programme. Scaling up care for mental, neurological, and substance use disorders*	2008	Program
	7.	WHO	*Mental Health Action Plan 2013-2020*	2013	Action plan
	8.	WHO	*European Mental Health Action Plan 2013-2020.*	2013	Action plan
DISABILITY	9.	Council of Europe	*Action Plan to promote the rights and full participation of people with disabilities in society: improving the quality of life of people with disabilities in Europe 2006-2015*	2006	Action plan
	10.	EU	*Equal Opportunities for People With disabilities: A European Action Plan (2004-2010)*	2003	Strategy
	11.	EU	*Equal opportunities for people with disabilities: A European Action Plan 2003-2005*	2003	Action plan
	12.	EU	*Situation of disabled people in the enlarged European Union: the European Action Plan 2006-2007*	2005	Action plan
	13.	EU	*Situation of disabled people in the European Union: the European Action Plan 2008-2009*	2007	Action plan
	14.	EU	*European Disability Strategy 2010-2020: A Renewed Commitment to a Barrier-Free Europe*	2010	Strategy
	15.	UN	*Convention on the Rights of Persons with Disabilities*	2006	Convention
	16.	WHO	*Disability and rehabilitation. WHO action plan 2006-2011*	2005	Action plan
	17.	WHO	*WHO global disability action plan 2014–2021: Better health for all people with disability*	2013	Action plan

CODING SCHEME AND CODING RULES

After sampling the documents, project continued with determining a coding scheme and coding protocols for three coders included in the project. Within the aspect of coding scheme development, we followed a mixed deductive/inductive approach. Some of our codes were theory-driven, and some of them were data-driven. Some initial codes derived from literature, as basic elements of any policy sector became codes that could be applied to each policy area. Those are policy goals, policy instruments, policy actors, policy problems, and target groups. Those were used as so-called parent codes and they will make a basis for the comparison among sectors. Named parent codes are compatible with three accounts of policy, [19] as goals and instruments are elements of policy as authoritative choice; actors are the main characteristic of policy as structured interaction; and problems and target groups are features of policy as social construction.

Additional codes, dominantly called child codes, subcategories of goals, instruments, actors, problem and target groups, were formed from empirical material, i.e. our sampled documents, hence there's no literature or prior research that could be used as inspiration and guideline. Inductive coding with several coders is quite unfeasible as it would literally take years of coder-harmonization and recoding. Boyatzis' book on thematic analysis [20] recommends preparation of summaries of empirical material that will bridge this "gap" by screening empirical material in whole, immediately at the beginning.

Therefor after sampling, we divided documents among coders (by expertise) and wrote short summary, 1 to 2 pages long, for each document. Summaries extracted main themes from the documents.[4] This gave us an overview of empirical material and main concepts and ideas that it contains. Additional codes to fill in the coding scheme were developed in comparing all summaries, in search for themes that cut across all or several documents from the sample. Through discussion of three coders, two new parent codes emerged: policy objectives and policy-making principles. As number and style of aims in the documents varied considerably, we decided to divide them onto goals, as long-term, unmeasurable, elusive aims, and objectives, as more precise and concrete aims that are set to fulfill goals. In addition, we added parent code of policy-making principles to gather different rationales of decision-making promoted in the documents. Most important thing extracted from summaries were child codes for each policy element. We ended up with a coding scheme consisted of 8 families of codes organized into two levels (see Table 2).

Table 2: Coding scheme

1. GOALS	**2. OBJECTIVES**	**3. INSTRUMENTS**	**4. ACTORS**
1.1. Human rights 1.2. Empowerment 1.3. Inclusion 1.4. Quality of life 1.5. Awareness 1.6. Community development 1.7. Diminishing suffering	2.1. Accessibility 2.2. Prevention 2.3. Rehabilitation and treatment 2.4. Employment 2.5. Universal design 2.6. Community-based	3.1. Promotion 3.2. Services 3.3. Funding 3.4. Legal measures 3.5. Training and education 3.6. Support and assistance 3.7. ICT technologies 3.8. Communication	4.1. States 4.2. International actors 4.3. NGOs 4.4. Political parties 4.5. Professionals 4.6. Private sector 4.7. Media
5. TARGET GROUPS	**6. PROBLEMS**	**7. POLICY-MAKING PRINCIPLES**	**8. ADMINISTRATIVE CODES**
5.1. Naming 5.2. Subgroups 5.3. General population 5.4. Settings	6.1. Definition 6.2. Determinants	7.1. Mainstreaming 7.2. R&D 7.3. Guidance 7.4. Collaboration 7.5. Country specific 7.6. Prioritizing 7.7. Reforming	8.1. References to other documents 8.2. Golden dust 8.3. Don't know how to code this 8.4. Junk

As a coding unit paragraph was selected. The following was determined by the formal criterion, which means that it is taken from the structure of the sources hence this is quite suitable for the documents as a type of data source. [21] Headings were incorporated as a part of the coding unit. Regarding the parts of documents which were organized as bullets, each bullet was treated as paragraph. Footnotes and pictures (including their titles and legends) were not included in the codes. Choosing a paragraph as a coding unit gives a firm and solid coding unit that is stable between the coders and makes separating segmentation stage unnecessary. Main coding rule in thematic analysis is that each coding unit can be coded into several codes, within the same family of codes or within different families. This means that one coding unit could be, for example, coded into several child codes within goals, or into for example one subcategory of goals, one subcategory of instruments and one subcategory of policy-making principles.

PILOT PHASE

After completing the coding scheme, we needed a pilot, a test coding. Pilot phase has two purposes. One is to test applicability of the coding scheme on the part of entire coding material, on a sub-sample. The other is to measure inter-coder reliability, by comparing codes of different coders in the test coding, to determine consistency and reliability of coding. [22] "An instrument is called reliable to the extent that it yields data that is free of errors". [23] It could be intersubjectivity or stability, as both seek for consistency in coding, first one among coders and second one during time. [24] It is measured by calculating coefficient of agreement (percentage of agreement x 100) and we also used this most basic measurement of inter-coder reliability. If a test coding ends up with some smaller changes done to the coding scheme and reliability is above 80% (or at least 70%), project can proceed to the main coding. If there are major changes in the coding scheme and reliability is fewer than 70%, then the test coding should be done on another sub-sample (but not more than twice). [25]

We conducted a test coding on the 10% of our sample. As the subsample should be as diverse as possible, which means that it should cut across all documents, we took second and third page from each document, and additional forth page from the 3 longest documents. We ended up with the 36 pages which formed a 10% sub-sample of whole document sample of 366 pages. For the total number of coding units in the sub-sample for test coding (320) a coding sheet was prepared (see table 3), to allow simple comparison of coding results between coders. [26] This was done for simplifying calculation of inter-coder reliability. Table was prepared in excel, with columns for each of the three coders. Test coding was done autonomously, as each coder proceeded with no influence or insight on the results of other two coders.

[4] Whole set of summaries contains 22 pages and is available from authors on request.

Table 3: Example of the sheet for test coding – coder 1

No.	Coding unit	Code 1	Code 2	Code 3
19	Considering that failure to promote the rights of citizens with disabilities and to ensure equality of opportunities is a violation of human dignity;	1,1		
20	Considering that ensuring equal opportunities for members of all groups in society contributes to securing democracy and social cohesion;	1,1	1,6	
21	Considering that the human rights based approach to ensuring the integration and full participation of people with disabilities in society should be incorporated in all relevant policy areas at international, national regional and local level;	1,1	1,3	7,1
22	Emphasizing the need to mainstream disability issues in all sectors through coherent policies and coordinated action;	7,1		
23	Acknowledging the work carried out by the Council of Europe Committee on Rehabilitation and Integration of People with Disabilities (CD-P-RR) in the drafting of this Disability Action Plan;	4,2		

The results of test coding were not satisfactory. To a total number of coding units of 320, we gave 1708 codes. In that, 342 were selected equally by all three coders for the same coding units, which constitutes a 20,02 % of agreement. Most common measurement of inter-coder reliability is between two coders. In our case 843 codes were double unified coded which constitutes 49,35% of agreement among coders. This is more than 20% under the minimal satisfactory level.

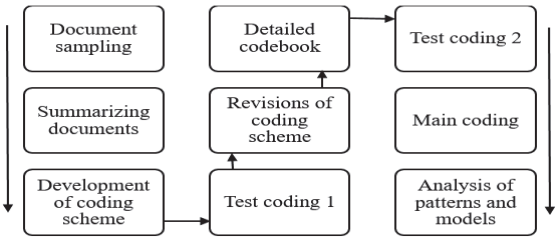
Since test coding is a tool for the development of coding scheme, it also showed some detailed insight on specific codes. Least used codes, those that were used less than 10 times, are following: 4.4. political parties (0); 4.7. media (3); 4.6 private sector (4); 2.5. universal design (8); 2.6. community based (9); 8.2. golden dust (9). On those codes, we should re-think if they are necessary as subsample was quite diverse and cuts across whole empirical material. Especially codes on classifying different type of actors should be re-examined. Five most used codes in triple coding are: 1.1. human rights (51); 4.2 international actors (25); 5.1. naming (of target groups) (24); 2.1. accessibility (22); 7.2. collaboration (20). These codes are obviously quite clear and well defined, and have a higher level of intersubjective understanding. Most used codes in single coding are: 5.1. naming (of target groups) (67); 7.3. guidance (58); 3.1. promotion (35); 4.2. international actors (35); 8.1. references to other documents (35). Those codes could be in the group of codes not clear enough that should have additional clarifications and rules of usage. Still, two codes, naming (of target groups) and international actors, overlap in the two groups. They are obviously quite present in the empirical material and should have clearer rules of application. This shows how frequency of code usage offers limited information on quality of codes and discussion among coders should be a principle instrument for the revision of coding scheme.

FURTHER STEPS AND INSIGHTS

As inter-coding reliability is too low, second test coding is necessary. For this purpose, a new sub-sample of 10% will be selected to re-test the coding scheme. In the preparation for the second testing, detailed discussion among coders will be conducted. It is different if coders disagree on the understanding of the paragraph of the document or of the code where some paragraph should be coded into. [27] Both aspects will be scrutinized. Firstly, we will discuss and re-examine each code, understanding of the code from each coder standpoint and how she applied it. This will create a basis for the detailed codebook development. Codebook will set down clear definitions for each code, some examples for each code, and inclusion / exclusion criteria for each code. Most important is to create decision rules for some overlaps – how to differ among some similar codes. This will standardize intersubjective understanding of codes and have a positive effect on inter-coder agreement in the second test coding. Also, agreement on how to code the most problematic coding units, units with most single codes in first test coding, will be made. The aim is to detect differences in understanding of empirical material that should be cleared and evaluated. Both should assist with the decision on changes in coding scheme – what codes should remain and what should be merged or deleted or added.

As a result, the second test coding will improve up our intercoder reliability results to a satisfactory level which will prove that our coding scheme is a solid analytical tool. Coding of all the sampled documents will then follow. After coding, the analytical part of the project will be focused on finding relationships among codes, co-occurrences of codes within same coding units. Set of relations among codes, especially among those from different code families, could produce a model for each policy case. Comparison of the contemporary content of mental health and disability policy will contain comparing of code occurrence, to find similarities and differences of the elements and features of those policies. Then analysis will continue with comparing of code co-occurrence, of relations among codes in two cases. Finally comparing will focus on sets of relations among codes, on main patterns or models of the two policies. All basic methodological steps of the project are illustrated on the following scheme.

Scheme 1: Basic methodological steps of the project



First half of the project implementation produced five important insights. First, there's a dilemma on the impact of the nature of the empirical material. Maybe one of the causes of the low result of test coding is a chaotic writing style of the European documents. Second, sampling of the documents at the European level is demanding and challenging so setting strict rules for their selection was a solid methodological decision. Three, codebook development and coding procedures with three coders are very complex and slow, but strongly enriching. There should be a profound evaluation of cons and pros for such a choice. Fourth, literature on thematic analysis does not set a limit of codes per coding unit, and this seems as a mechanism for upgrading intercoder reliability. And fifth, biggest error in the methodological conducting in the project was non-creation of the detailed codebook before first test coding, even thou so many code seem completely self-evident. This is the only step of the project that was not done "by the book" and seems as the main reason for the poor test coding results.

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