Refereed Paper

Use of digital resources in the Italian disability community: An exploratory study

Claudio Melchior[1] and Filippo Trevisan[2]

[1] Università di Udine, Italy [2]American University, Washington, US

Abstract: Internet use has had mixed consequences for disabled people. On the one hand, it has favoured communication and inclusion processes. On the other hand, it has also contributed to new forms of social exclusion due to persisting access and accessibility gaps. This paper begins to investigate internet usage in the Italian disability community by examining Disabili.com, the country's top disability-focused online forum, and reflects on the kinds of "communities" – if any – that have formed around this platform through mutual aid or other mechanisms. In Italy, disabled people have built significant digital resources including blogs, forums, and interactive social media pages. However, whereas similar resources have been studied in countries such as the U.S. and the UK, an in-depth investigation of their Italian counterparts is still missing. Italy passed anti-disability discrimination legislation several years after all these countries, which makes it an interesting case study of online disability community where the relevant legislative frameworks and protections are less established than elsewhere. After reviewing several Italian disability portals, this study explores both quantitatively and qualitatively the "Disabili.com" discussion forum between 2006-2022. In particular, this analysis identifies: a) the top discussion topics; b) the top disability-related issues; c) the prevalence of different disabilities among forum users; d) the types of help and mutual aid requests conveyed through this platform. Results show that today this forum is primarily an information resource that is useful to 'map' the main online discussion topics of the Italian disability community (due to its popularity, steady membership, search engine ranking compared to similar resources, and number of visitors). Overall, conversations and messages dedicated to relational aspects ('esteem and emotional' and 'belonging support') are the most frequently discussed topics between 2006-2022. However, their prevalence has decreased over time in favour of 'informational support' type messages, which represent the vast majority of this forum's current content. Our analysis shows that, since at least 2019, relationship-focused posts have been supplanted by content about mobility and legal or bureaucratic advice. In addition, we identified a specific relevance, in the Italian context, of topics related to the law, benefits, tax relief or practical aspects related to the relationship with the bureaucracy. Finally, reference to physical disabilities clearly prevails, while other forms of disabilities are only rarely mentioned. This seems to reflect a traditional 'disability hierarchy' in media representations that it would be important to investigate further.

Keywords: Disability, Digital resources, Community, Content analysis, Forum

Introduction

Between 15%-20% of the population of every country – over one billion people worldwide – have a disability (WHO, 2011). Historically, people with disabilities have been marginalized in virtually all aspects of social life, from education to the economy, and from everyday services to political participation. Social model of disability theorists (Oliver, 1990) argued that this is due to disabling

and exclusionary environments, not individual impairments, and that emancipation for people with disabilities requires the removal of barriers to create accessible environments, both physical and cultural. Although social model theory has evolved since then to focus on the interaction and combined effects of disabling environments and individual impairments (Shakespeare & Watson, 2001), the proliferation of internet-based media over the last two decades has led disability scholars to ask whether online spaces can provide more accessible "spaces" for people with disabilities to connect, interact, and become empowered.

Early work on disability and Information and Communication Technologies (ICTs) was marked by a certain degree of optimism. This led some prominent scholars and activists to say that soon, thanks to technological advances, "impaired persons will […] no longer be oppressed by disabling social conventions and disabling environments but will be absorbed in the mainstream of social interactions" (Finkelstein, 1980: 37). Their expectations, however, soon clashed with the fact that many key technologies and much internet content remained largely inaccessible until recent years. At least until the early 2010s, technology companies like Apple, Facebook, and Twitter tended to be unresponsive to the concerns and requests of the disability community (Ellis & Kent, 2011). This is despite several studies pointed out that building accessible websites and online services is undoubtedly good for business because it significantly expands the user base and positively impacts not only the disability community, but also non-disabled people as it improves usability (G. Goggin & Newell, 2007).

In the last five to ten years, there has been a rapid acceleration toward a more accessible and inclusive internet. This was driven simultaneously by do-it-yourself creative solutions to accessibility issues such as plug-ins and alternative accessible services developed by disabled people themselves (Ellis & Kent, 2016), increased and more affordable mobile connectivity, and a new attitude from technology companies. Overall, however, the picture remains mixed. On the one hand, digital media innovation has favoured communication and inclusion processes for people with disabilities, particularly with regard to political participation (Trevisan, 2022) and work (Qu, 2020). On the other hand, people with disabilities continue to be significantly less able to access the internet independently both in highly connected Western countries such as the U.S. (Anderson & Perrin, 2017) and, even more so, in developing nations (Satari, 2021). In addition to accessibility, another determinant of digital inclusion for people with disabilities that is arguably as important but has received comparatively little attention is motivation. Access and accessibility make digital technologies available to people with disabilities. However, this does not necessarily mean they will use them. As Tsatsou (2020) pointed out, it is imperative to consider disabled people's agency when looking at issues of digital inclusion, which in practice translates in to measuring their motivation to use these technologies and identifying the drivers behind it.

Online disability communities and the case of Italy

Despite the challenges outlined above, a majority of people with disabilities in advanced economies and highly connected countries use the internet on a daily basis. Thus, while pointing out the need to resolve persistent access and accessibility gaps, it is also important to study what disabled internet users do online and what are the implications of these uses. Digital disability studies emerged more slowly compared to other sub-fields in internet studies. This was mainly because of concerns that lack of accessibility rendered the internet irrelevant to people with disabilities, leading many to write off this group as "internet have nots" in alignment with a simplistic understanding of digital divide theory. More recently, however, scholarly interest in the relationship between disability and the internet has soared and more nuanced approaches to these issues have morphed into a lively field of studies. Offering a comprehensive review of all this literature would go beyond the scope of this paper. However, it is helpful to provide some pointers here to help frame the context and main aims of our empirical investigation.

One trend in digital disability studies has been to focus on digital affordances. Besides examining services that are seemingly mundane but also central to improving quality of life such as online shopping and e-banking, there is mounting evidence of the ability of digital media to connect people

with disabilities around specific needs or identities. This is important not only because people with disabilities are more likely than non-disabled people to be socially isolated, but also because many of them lack opportunities to interact with other people with disabilities in person due to distance and a myriad other barriers. This is not limited to online communities that are disability- or illness-specific (Vicari & Cappai, 2016). Instead, it is also relevant for virtual groups based on the intersection of disability with other identities such as gender and disability, race and disability, sexual orientation and disability, and so on (Cole & Nolan, 2019).

Among the most notable outcomes of these groups is the ability of participants to find and share with others ways to overcome internalized stigma – which typically leads to self-isolation – and find pride and a feeling of community belonging. This, in turn, has fuelled the rise of new instances of digital disability activism, sometimes in open opposition to the work of established advocacy organizations, which were criticized by a new generation of tech savvy self-advocates for not expressing a disabled leadership and adequately representing grassroots grievances. One illustrative example is the work of American neurodivergent self-advocates, which in recent years used social media to successfully expose and urge others to "boycott" large autism organizations led by non-autistic people that supported policies that would actually hinder independence and emancipation for autistic and other neurodivergent people (Parsloe & Holton, 2018). Finally, other work has also shown that, on a personal level, uses of social media and other platforms can boost interpersonal support and participation in social and political life, although at the same time they can also generate psychological stress and anxiety where online context collapse requires users to navigate difficult relationship issues (Trevisan, 2020).

Within these broader international trends, Italy constitutes an interesting case study. While other Western countries such as the U.S. and the UK pioneered anti-disability discrimination legislation aimed at promoting the inclusion of people with disabilities in all aspects of social life in the early 1990s with the Americans with Disabilities Act (1990) and the Disability Discrimination Act (1995) respectively, Italy waited until 2006 to pass similar legislation. The more recent and less established nature of legislative frameworks and protections for Italian disabled people, in addition to cultural differences, makes it an interesting country for studying digital disability spaces. Moreover, in Italy people with disabilities have built significant online resources through websites such as "Disabili.com" and social media pages such as "Ability Channel." Yet, an in-depth investigation of these spaces is still missing. Previous work on similar digital disability resources in other countries have shown that community can flourish in these digital venues (Stetten et al., 2019; Parsloe, 2015), but what about the Italian context? Recent studies have revealed alarming rates of social isolation for Italian people with disabilities with nearly 22% living in complete isolation and almost 25% whose few relationships are exclusively based on help and support (ISTAT, 2019: 95-96). These, however, are only rough measures of sociality and do not account specifically for online relationships and interaction. Thus, to complement this picture, it is important to ask whether online communities of people with disabilities have formed around Italian digital disability spaces. If so, which kinds of communities are these, what are they based on, and what is their relationship to the digital platforms that support them?

Another significant factor to keep in mind in this investigation is the temporal aspect. Early work on disability and the internet showed that people with disabilities preferred blogs and forums to more interactive and participatory platforms (G. M. Goggin & Noonan, 2006). More recently, however, disabled internet users have shifted toward a broader range of platforms including, for example, video-sharing platforms like YouTube that provide more relevant or engaging content, or enable them to interact in more meaningful ways (Dobransky & Hargittai, 2016). This suggests that, early on, it may have been the lack of accessibility of more innovative sites and platforms that tied users with disabilities to more traditional online venues, not their affordances. It is interesting to consider whether this is true also in the Italian context and, over time, we see a move from more traditional sites such as forums to other platforms as these become more accessible.

For these reasons, this study provides an initial overview of whether the use of Italian digital disability resources is growing over time, how it has evolved, which kinds of "communities" – if any – have formed around them through mutual aid or other mechanisms, and illuminate potential dynamics of exclusion and digital divide within these online spaces. To do so, we review some of the

main Italian interactive web pages dedicated to disability and examine in detail the discussion forum of Disabili.com, one of Italy's largest digital disability platforms, between its founding year 2006 and August 2022.

Objective

This study set out to explore the most popular Italian online forums and social media pages dedicated to and used by the disability community in order to 1) communicate, 2) obtain and disseminate specific information and 3) receive or provide different types of social support. This exploration has enabled us to sketch an initial map of digital communications in the Italian disability community. In particular, this highlights: 1) the most popular discussion topics; 2) the main issues related to disability and disabled people; and 3) the prevalence and types of help and social support conveyed through these digital networks.

Identifying Italy's most popular disability digital discussion venues

In order to map of the digital discussion of the Italian disabled community, it was necessary to select contents that were: 1) popular (in terms of visibility, interactions, and participation); and 2) generalist (i.e. they were not focused a priori on specific themes and, instead, allowed users to set up discussions on any topic). Thus, we searched web search engines[4] for forums and online chats that met these criteria. At the same time, we carried out the same search within social media. For this reason, we focused on Meta platforms, and Facebook in particular, as the other social media we initially tested (Instagram, Twitter, etc.) did not present content and communicative contexts useful for testing written discussion that could represent the 'conversation community' condition of the disabled people we are trying to analyse.

A search in search engines indicated to us that, without a doubt, the most popular (and almost unique) Italian discussion forum dedicated to the theme of disability is hosted by the site 'Disabili.com'[5]. An initial analysis of this resource, conducted using online competition analysis tools as 'SEO Zoom', 'URL Checker', 'Lighthouse Search Console' (tools normally used for marketing) indicated to us that the forum of 'Disabili.com' is: 1) the digital environment of this type that is most popular, interacted with and frequented by the Italian disabled community; 2) its presence on the network is both longstanding and significant in terms of size (participation in the forum began in 2006 and has increased constantly, albeit somewhat slowly, since then despite competition from social network platforms such as Facebook, which is still very popular in Italy) and 3) Disabili.com outstrips all its possible competitors in the Italian online sphere in terms of popularity, participation and interactions. The messages contained in this forum also present generalist content and are not

---

[4] We used Google and Bing search engines (checked 'in incognito') using both Chrome, Firefox and Opera browsers. In each case, the result was always the same. Searching for 'disabilità' ('disability' in Italian), the site 'Disabili.com', which hosts a very popular forum, always appeared among the top five results (the others were Wikipedia and official government sites). Disabili.com's only real 'competitor' for search engine visibility was the site 'DisabiliNews.' This is the parent company of a popular Facebook page with the same name that we discuss later in this paper. Unlike Disabili.com, however, 'DisabiliNews' does not contain forums, chats or other open resources. Instead, it has 'outsourced' these functionalities to Facebook. Searching for the word 'disabili' ("disabled people" in Italian) using the same method, Disabili.com always comes up as the first result.

[5] 'Disabili.com' is a disability-specific online newspaper. Founded in 2006 by a small group of private individuals, it has been published by Costatilla S.r.l. (Padua, Italy). It does not belong to any disability-specific organisation and is fully supported through advertising revenue. Consequently, it is an entrepreneurial entity whose revenue (Company Register data) is 'below 300,000' Euros and was reported to be growing in recent years.

preordained in the topics of discussion, thus also satisfying our second selection criterion. For these reasons, we decided to focus on 'Disabili.com.'

The same type of research was also carried out on Facebook. This enabled us to identify the most important social groups and pages in terms of participation and popularity for the Italian disabled community, including, in order of number of members/followers: 1. 'Persone con disabilità e diritti'; 2) 'Esplicando Disabilità'; 3) 'DisabiliNews' and 4) 'Ability Channel'. A sample analysis of the discussion topics contained within these groups indicated that 'Esplicando Disabilità' and ' Persone con disabilità e diritti' (although they are the most popular and participated in discussion resources of the Italian disability community) do not present the second of our selection criteria: their discussion contents are not generalist. Instead, both these groups are strongly focused on issues related to legal issues and disability rights. For example, topics include: legal aid; accommodations; government benefits; tax breaks; bureaucracy; and so on. Therefore, they were not very useful for drawing a map of the main topics of discussion and mutual aid of the disability community in Italy, which is our goal, and we decided to exclude from the analysis. With that being said, the fact that the two most popular social media discussion groups in the Italian disability community are both dedicated to the discussion related to the law and the world of rights, is in itself an interesting piece of information which, in future research, it will be important to analyse.

'DisabiliNews' and 'Ability Channel', on the other hand, present generalist content. The sample analysis of their content indicated that, apart from the high overall popularity of these two online venues, 'Ability Channel' was a Facebook group characterised by little interaction from below. Although there are many posts with high basic engagement indicators such as "likes" and shares, many fewers include actual comments and open discussion by forum users. This group therefore did not seem to us to be fully useful for drawing a map of the digital conversation of the Italian disabled community, and was therefore excluded from the analysis. 'DisabiliNews', on the other hand, appeared to be a popular and generalist group, characterised by many animated comments and discussions from below. It therefore met all our selection criteria and was included in the analysis. The chart below summarizes the selection process for our analytical corpus.
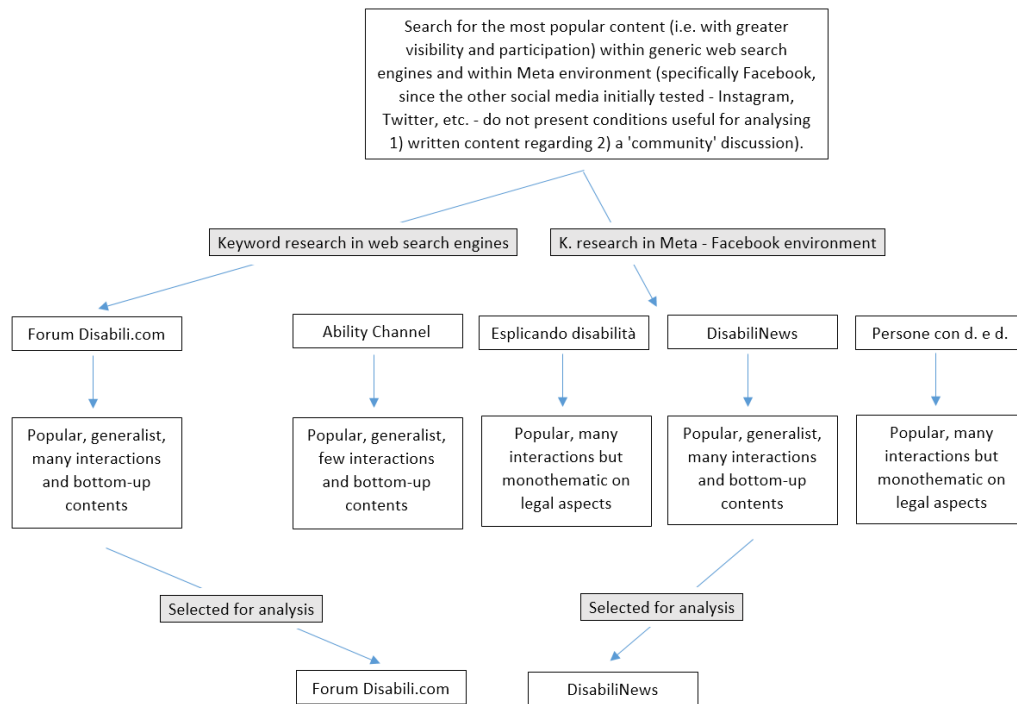
Search for the most popular content (i.e. with greater visibility and participation) within generic web search engines and within Meta environment (specifically Facebook, since the other social media initially tested - Instagram, Twitter, etc. - do not present conditions useful for analysing 1) written content regarding 2) a 'community' discussion).

Keyword research in web search engines

K. research in Meta - Facebook environment

Forum Disabili.com

Ability Channel

Esplicando disabilità

DisabiliNews

Persone con d. e d.

Popular, generalist, many interactions and bottom-up contents

Popular, generalist, few interactions and bottom-up contents

Popular, many interactions but monothematic on legal aspects

Popular, generalist, many interactions and bottom-up contents

Popular, many interactions but monothematic on legal aspects

Selected for analysis

Selected for analysis

Forum Disabili.com

DisabiliNews

Figure 1. Key steps in selecting content for analysis

Method

The first step was to check the search engine ranking, network visibility, overall volume, and trends over time of user traffic and views of Disabili.com's forum. This analysis was carried out using tools such as 'SEO Zoom', 'URL Checker', 'Lighthouse Search Console', which are typically used in digital marketing analysis.

Once the consistency and relevance of the data chosen for the analysis had been verified in this way, the overall corpus, consisting of the totality of the messages contained within the Forum from 2006 to date (725,444 messages divided into 49,383 discussions) was categorized by type and theme, using:

1. the search tools and typologies available through the forum's own interface;
2. an overview survey based on word frequency of titles using MaxQda's wordsearch function
3. a close reading of a systematic sample of thread titles contained in the various sections of the forum.

Through this approach, we identified 16 different topics. 12 of these were then grouped into five different macro-themes based on content affinity.

Once a list of the main themes and macro-themes had been drawn up, the steps taken in the previous phase were then used to match the various sections of the forum to the four types of 'functional social support' (Stetten et al., 2019) they refer to.

Given the size of this corpus, it was necessary to sample from it to carry out an in-depth qualitative examination. Sampling could have been carried out by: 1) sampling the entire 2006-2022 period; or 2) focusing on the most recent threads in their entirety. Since our objective concerns the mapping of the current digital conversation of the Italian disabled community, we chose the second approach and

scraped 1) all the forum conversations from the start of 2019 to July 2022, 2) that had at least one response (conversations starter posts that did not receive any response were exclude from the analysis).

Through this process, we obtained a qualitative sample including 3,244 messages organized in 561 different threads. Our desire to develop a categorical qualitative analysis by logical nodes with the use of qualitative analysis software to trace the specific themes and types of social support in greater detail clashed with the time required to produce this paper. Given this is an on-going project, in this paper we present a preliminary estimate of the various themes contained in the forum based on close reading of the conversations and messages contained in the qualitative sample and complemented by a overview of the most frequent words contained in the messages and conversation titles. Next steps will involve additional qualitative analysis of individual discussion topics within the forum.

Quantitative analysis of Disabili.com's forum

The decision to analyse the conversation materials present within Disabili.com's forum, following an initial check carried out through digital tools for analysing online competition and through an initial sample reading of the messages, proved to be a good choice. The forum 'Disabili.com' is undoubtedly the most significant and participatory online discussion resource found in the Italian context in the field of disability. The analysis of the site's performance and positioning conducted using specific tools (such as 'SEO Zoom', 'URL Checker', 'Lighthouse Search Console') clearly showed that:

1. there are no other similar resources in Italy;
2. this forum is indeed widely used and has been running for a long time (it is online and has significant content from 2006 to date);
3. it has an excellent positioning in search engines, such that if a user searches for generic keywords related to the "world of meaning" of disability in the Italian language, he always gets as the first result (or immediately after) this site.

A preliminary reading of the forum content confirmed first impressions, showing conversational materials that are available, manageable and sufficiently "rich" to be analysed from the point of view of the variety of contents and depth of the conversations (instead, a preliminary sample reading of content in the Facebook group 'DisabiliNews' showed a tendency to focus on few themes, less depth of the discussions compared to the forum we analysed, and greater difficulty of collecting them back in time). In light of this, analyzing this forum is especially useful to generate an initial map of the use of digital conversation by the "Italian disabled community".

From 2006 to date (data as of September, 2022) Disabili.com's forum has accumulated a total of 819,933 messages divided into 56,475 different discussions. One part of the forum includes archived conversations on specific topics that have long been archived and are old and no longer active, which makes them less relevant to our analysis. Focusing only on conversations that are still active, the total number of discussions and messages we are analysing is 725,444 messages divided into 49,383 conversations

Disabili.com forum without archive	Discussions	Posts
Total 2006-2022	49,383	725,444

Table 1. Total number of conversations and messages contained in the Disabili.com forum

Clearly, such a large number of posts makes it impossible to apply qualitative analysis techniques on the whole corpus. We have therefore attempted to reorder the material using the titles of the discussion topics as a basic criterion, as well as the thematic areas and search tools within the forum

itself. Some themes, those most numerous and articulated in content, were then imputed within some macro-themes of synthesis that grouped them by logic and meaning. Table 2 contains the quantitative detail of this synthesis, organised by theme and macro-theme.

Macro-theme	Sub-theme	N° Discuss.	% Discuss.	N° Posts	% Posts
Friends & meetings	Friends	25,143	50.9	54,1856	74.7
	Soulmates	2,817	5.7	47,316	6.5
	Total Macro Theme	*2,7960*	*56.6*	*58,9172*	*81.2*
Family & help	Parents Together	5,293	10.7	57,329	7.9
	Let's Help	937	1.9	4,976	0.7
	Total Macro Theme	*6,230*	*12.6*	*62,305*	*8.6*
Products & technologies	Products, Technologies and IT	1,191	2.4	7,099	1.0
	Mobility & Cars	1,769	3.6	12,771	1.8
	Market	3,699	7.5	10,065	1.4
	Total Macro Theme	*6,659*	*13.5*	*29,935*	*4.1*
Work, law & tax	Job Offers and Proposals	1,051	2.1	3,970	0.5
	Law & Tax	2,854	5.8	15,566	2.1
	Total Macro Theme	*3,905*	*7.9*	*19,536*	*2.7*
Culture, holidays & leisure	Travel & Holidays	827	1.7	3,917	0.5
	Artists	434	0.9	1,930	0.3
	Satire and Humour	758	1.5	5,050	0.7
	Total Macro Theme	*2,019*	*4.1*	*10,897*	*1.5*
Medicine	Medicine	1,060	2.1	5,637	0.8
Society & public engagement	Society & public engagement	629	1.3	4,870	0.7
Sport	Sport	604	1.2	2,192	0.3
School & University	School & University	317	0.6	900	0.1
Grand total		49,383	100	725,444	100

Table2. Total number of conversations and messages of Disabili.com's forum organised by macro-themes and sub-themes

As is shown in the table, the most discussed macro-theme within the forum is, by far, 'Friends & meetings' (81.2% of the posts in the forum from 2006 to date). This is the most relational macro-theme within the forum and is evidently the most used resource by those who participate in the discussion. The messages contained in this macro-theme are mainly aimed at seeking or offering friendship and, to a lesser extent, romantic relations, as well as psychological and relational support. To these messages, which are already extremely numerous, should logically also be added those of the second largest macro-theme: 'Family and help'. This second macro-theme is in fact also intrinsically relational. This is especially the case with posts focused family, where we found numerous examples of seeking or offering relationships. Often, this is linked to the presence of disabled children within the family. One frequent example are posts in which parents of disabled children look for other families in the same situation to connect with, join forces, and create social and friendship contexts that can positively involve their children. This sample reading we carried out to better understand discussion themes will allow us to expand on these descriptive insights with more detail in the next section. For now, it is enough for us to observe that relational and affective themes characterise a very high percentage of the entire forum content.

To generate an analytical summary of the corpus, we started from the general concept of 'social support' as defined by Gottlieb and Bergen (2010: 512-514). Within the analytical definition of these types of social support as articulated by the authors, we focused on the aspect of "functional support" (i.e. "the varied kinds of resources that flow through the network's social ties". Ibid.: 512). Then, we applied the four categories used by Stetten et al. (2019) to articulate this concept. These include: (1)

esteem and emotional support; (2) informational support: (3) instrumental support; and (4) belonging support (Stetten et al., 2019: 2)[6]. Using the title of the discussions and the sample reading of the posts, we matched the various discussion topics listed in table 2 above with the most recurrent type of "functional social support." The result of this quantitative reconnaissance can be found in table 3.

Theme	N°Disc.	%Disc.	N°Mess.	%°Mess.	Prevalent type of functional social support
Friends	25,143	**50.9**	54,1856	**74.7**	Esteem emotional support/Belonging support
Soulmates	2,817	**5.7**	47,316	**6.5**	Esteem emotional support/Belonging support
Parents Together	5,293	**10.7**	57,329	**7.9**	Belonging support/Informational support
Let's Help	937	**1.9**	4,976	**0.7**	Belonging support/Informational support
Products, Technologies and IT	1,191	**2.4**	7,099	**1**	Informational support
Mobility & Cars	1,769	**3.6**	12,771	**1.8**	Informational support
Market	3,699	**7.5**	10,065	**1.4**	Instrumental support/Informational support
Job Offers and Proposals	1,051	**2.1**	3,970	**0.5**	Instrumental support/Informational support
Law & Tax	2,854	**5.8**	15,566	**2.1**	Informational support
Travel & Holidays	827	**1.7**	3,917	**0.5**	Instrumental support/Informational support
Artists	434	**0.9**	1,930	**0.3**	Belonging support
Satire and Humour	758	**1.5**	5,050	**0.7**	Esteem emotional support
Medicine	1,060	**2.1**	5,637	**0.8**	Belonging support/Informational support
Society & public engagement	629	**1.3**	4,870	**0.7**	Informational support
Sport	604	**1.2**	2,192	**0.3**	Instrumental support/Informational support
School & University	317	**0.6**	900	**0.1**	Informational support
Total	49,383	100	725,444	100	

Table 3. Conversations and messages organised by typology of functional social support

At a first look, it would seem that "informational support" is the predominant type of support expressed on this forum, given that it is relevant to 12 out of 16 discussion topics. In reality, however, many of these informational discussions include far fewer messages than the other discussions ('friends', 'parents together', 'soulmates'). If we also consider the number of posts in the various sections, in the overall forum since 2006 the relational posts (characterised as 'Esteem emotional support' and 'Belonging support') actually seems to prevail.

The qualitative analysis of Disabili.com's forum

The corpus of the qualitative analysis (all conversation threads between January 1, 2019 and August, 2022 with at least one answer) shows a significantly different situation compared to the quantitative findings on all forum conversations from 2006 to 2022, which we have discussed so far. Specifically, the weight of the various topics changes, with a clear increase in the number of messages mainly classifiable as 'informational support' (in particular the topics 'Mobility & Cars'. 'Law & Tax' and 'Market'), while the specific topics relating to 'esteem emotional support' and 'belonging support' ('Soulmates' and 'Friends') fall in number (though remaining relevant). The theme 'Medicine' is also numerically higher than in the quantitative corpus covering the entire period 2006-2022. Table 5 includes details of the thematic breakdown of the qualitative corpus, sorted by total number of messages analysed. Therefore, there has been an evolution of forum content: in the most recent years, the focus of discussions on this forum seems to have shifted to discussions and messages related to informational support and a relative decline of topics related to emotional and relational aspects.

---

[6] Esteem and emotional support: "communications from others that convey being held in high esteem, offering help with one's emotional state, or expressing acceptance, caring, liking, respect, concern, empathy, or sympathy". Informational support: "offering help in the form of advice, constructive feedback or affirmation, new information or perspectives, or references to new resources". Instrumental support: "provision of tangible aid and services, such as offering financial aid, providing material resources, or taking on a responsibility". Belonging support: "conveys a sense of social belonging and having others to engage with in shared social activities" (Stetten et al., 2019: 2).

Theme	N° Disc.	N° Mess.	% Disc.	% Mess.
Mobility & Cars	87	607	15.5	18.7
Law & Tax	113	471	20.1	14.5
Market	123	451	21.9	13.9
Soulmates	55	448	9.8	13.8
Friends	31	235	5.5	7.2
Medicine	18	181	3.2	5.6
Parents Together	19	169	3.4	5.2
Artists	4	166	0.7	5.1
Let's Help	32	151	5.7	4.7
Products, Technologies and IT	27	119	4.8	3.7
Travel & Holidays	14	102	2.5	3.1
Job Offers and Proposals	15	49	2.7	1.5
Society & public engagement	9	46	1.6	1.4
Sport	8	23	1.4	0.7
School & University	4	13	0.7	0.4
Satire and Humour	2	13	0.4	0.4
Total	561	3244	100	100

Table 4. Thematic breakdown of the qualitative corpus, sorted by total number of messages analysed

The prevailing topics of the forum, as measured over the last three years and eight months, are 'Mobility & Cars', 'Law & Tax' and 'Market'. We will now proceed to a specific description of the prevailing topics carried out through 1) the systematic reading of the messages; 2) the analysis of the conversation titles and 3) the most frequent words contained in the messages of the various thematic sections.

The 'Mobility & Cars' section (607 messages in 87 conversations with at least one reply) is rather monothematic. We can find messages related to 'informational support' such as (in order of occurrence) 1) obtaining or renewing a 'special' driving licence, 2) searching for or offering to buy cars modified for the specific needs of disabled people (especially in relation to wheelchairs) and 3) other types of information related to exemptions or reductions in specific car taxes. There is therefore a high interest within the current digital Italian disability community in autonomous mobility and a dedicated market for these modified and 'special' cars. The relevance of this interest, which has grown over time, is reaffirmed by the fact that numerous messages of the same type can also be found within the 'Market' section (451 messages – 13.9% - in 123 conversations – 21.9% of overall conversations). The topics most frequently found within the 'Market' section concern, in order: 1) supply/demand for wheelchairs and other mobility aids; 2) catheters and other specific medical equipment 3) lifts, special chairs and other home-related products and 4) modified cars, as mentioned above. The topic 'Law & tax' (471 messages in 113 conversations – 14.5%, 20,1.) is totally related to the offer and search for 'informational support' on topics such as (in order): 1) disability pension and citizenship income; 2) Law 104; 3) subsidised purchases or taxes; 4) accompaniment allowance and 5) driving licence, which returns as a relevant topic in this section as well.

In contrast to these predominantly informative topics that have grown in importance for forum users over time, there are the relational topics that, while remaining relevant, have seen their weight

decrease in terms of number of posts and conversations. The posts in the 'Soulmates' (448 posts in 55 conversations – 13.8%, 9.8%) and 'Friends' (235 posts in 31 conversations – 7.2%, 5%) sections overlap and intersect in terms of content in a fairly fluid manner. The prevailing type of support that is recalled is that concerning 'esteem and emotional support', but several discussions expand to a group dimension, especially those concerning friendship requests, which then become associated with the concept of 'belonging support'. The conversations contained in the 'Soulmates' section, addressed to the search for relationships, are more numerous than the section devoted to the search for friendships. However, the depth of those conversations (measured as the number of replies obtained and the repartee between messages created) is significantly higher in the 'friendships' section, whereas the conversations opened in the search for relationships usually obtain few or no replies. For example, 108 conversation starter posts were posted to this section of the forum between January 2019 and August 2022. Of these, nearly half (48.1%) received no response. Given the theme of these messages, the frequent lack of responses recalls by assonance the concept of loneliness, which is repeatedly expressed in the qualitative corpus. In light of this, this forum does not appear to be conducive to affective relationships. One reason may be lack of privacy, given the open nature of this platform. More broadly, many of the posts in this section of the forum are requests for information on external communication resources (for example, dating sites) directly dedicated to romantic encounters between disabled people. The answers in the forum show that these external resources, at least in Italy, do not currently exist or, if they do, Italian disabled people are largely unaware of them.

The 'Medicine' section includes information, sought or offered, on specific medical topics: most frequently, messages on the topic of spastic paraparesis and lower limb problems are found, but then the list of impairments, conditions, and other problems gets longer. Given the relevance of the data in this thematic section, we enclose in Figure 2 a tag-cloud generated with Nvivo that contains all the significant keywords of the titles of these 181 messages and 18 conversations (5,6%, 3,2%). As can be seen, this content is also predominantly concerned with disabilities or physical issues.

Figure 2. Tag-cloud of significant keywords in the titles of 'medicine-themed' conversations.

The messages contained in the 'Parents together' section (19 conversations with replies from 2019 to 2022, spread over 169 different messages) are rather heterogeneous. They contain both forms of 'emotional support' and 'belonging support', as well as various requests for informational support related to specific issues concerning Law 104 (the Italian law that regulates disability benefits), filling median income assessment ('ISEE' in Italian), other benefits, joint bank accounts, school allowances and so on (thus overlapping with the typical contents we find in the 'law' section). There is therefore a clear request for 'informational support', though not a complete lack of relationship-focused topics,

such as the request for advice on the organisation of a disabled girl's 18th birthday party, or requests for help related to the difficulty of managing early puberty onset, and related needs, of a boy in the same condition. In the parenting section, posts are almost always written by parents of children or young people with disabilities, and the topics of conversation are all about caring for them, the bureaucratic complexities or, on the contrary, allowances and support structures that may be available for these kids and their families.

The 'Let's help' section (151 messages, 32 conversations) also contains a similar cross-section of content, with a strong prevalence of informational help requests relating to topics such as, here too, Law 104, legal information, disability pensions, monthly allowances, caregiver for disabled people, residential facilities ('case famiglia' in Italian), and so on. There are, however, also fully relational topics, such as requests for help relating to the difficulty of accepting disability, particularly when it concerns a loved one and more specifically in the case of children, but also conversations devoted to life stories emphasising the difficulty of accepting this situation first-hand ('it was hard but I'm doing it') or venting about loneliness.

The section called 'Work' (49, 15) contains some job requests and offers, but it too is predominantly made up of messages with an informative content concerning bureaucratic aspects or challenges related to disabled people's employment, which also include issues related to mobbing or the specific opportunities provided to this category of people by remote work. However, this is a category which, like the following ones, does not appear to be particularly used by forum users. The category 'Travel & holidays' (102, 14) contains messages devoted to the specific topic of travel assistance (offered or requested) or to destinations equipped for disabled people. Here, too, one finds several mentions of a condition of loneliness, which one tries to overcome through these occasions, which we can summarise with the title of one specific conversation: 'fed up of travelling alone'.

The 'Products, Technologies and IT' section contains messages devoted mainly to stair lifts, special lifts, braces and specific bathroom equipment (thus mainly aids for the physically disabled). There is also a minority of conversations devoted to software topics, but these are extremely rare. In general, the interest of this community seems much more oriented towards physical products compared to digital and virtual products. This is interesting because it contrasts with an increasingly digitised reality (in Italy, in particular after the early 2020s, following Covid-related lockdowns and travel restrictions) that has seen an uptick of software and hardware products specifically dedicated to reducing access barriers for persons with various disabilities when using the internet. The issue, from the data we are analysing, does not appear so relevant in the online discussion of the Italian disabled community.

The sections dedicated to art and entertainment are extremely small and focus mainly on music, as well as some reflections on media representation of disabled people (a theme which appears barely mentioned here but which we find strongly within the Facebook group 'DisabiliNews', where photos of 'visibly' disabled people - hence mainly with physical disabilities - appear among the most recurrent contents). Finally, accompanying allowances, removal of architectural barriers and instances of venting about negative experiences with health services or specific bureaucratic difficulties (e.g. the payment of caregivers) constitute the content of the 'Society & public engagement' section. The right to education, searching for the most accessible university or school, or further bureaucratic information on fees or constitute the content of the (little frequented) 'School & university' section of the forum. Marathons, special go-karts or the buying and selling of dedicated sports equipment, such as the monoski, constitute the main topics of the small sports section.

Discussion and preliminary insights

This paper included a preliminary analysis of Disabili.com's discussion forum – Italy's largest discussion forum dedicated to disability issues and disabled people – between 2006-2022. This forum, given the articulation and number of messages, as well as the different users who use it, constitutes an information resource that enabled us to begin mapping, albeit still tentatively, the Italian disabled community's key online discussion topics. The data provided by digital marketing analysis tools also

confirmed this impression, as they showed steady participation in this forum over time, its content's relevance on the most popular search engines, and its continued popularity as shown by the current number of visits and views.

A quantitative analysis of all the messages posted to the forum from January 2006 to August 2022 showed that, overall, conversations and messages dedicated to relational aspects (which can be linked to 'esteem and emotional support' and 'belonging support') are the most frequent and discussed of all topics. That said, their prevalence has decreased over time, while messages dedicated to 'informational support' have climbed to the top spot in more recent years.

This switch from relational to informational topics emerges in particular when comparing the data from the overall corpus (since 2006) and the data from the last three and a half years, which we also analysed qualitatively. In the data from the most recent period, we find that the most frequent topics in the current phase concern market, mobility, and legal or bureaucratic advice.

The importance of these more instrumental and practical topics, as opposed to relational topics, is underlined by the fact that content of this kind is also found linked to other specific topics in our qualitative corpus (e.g. within the topics we have categorised as products and technologies, travel, sport, etc.). The specific relevance of topics related to the law, government benefits, tax relief and other practical aspects related to interfacing with public bureaucracy also emerges from the high number of messages of this kind contained in the 'Law' section (but also scattered in all the other thematic sections of the forum). This is also corroborated by another trend we observed when selecting the materials for analysis, where we noticed that the Facebook groups that are most popular among Italian disabled people are precisely addressed to the search for information related to these topics.

Informational support (relating primarily to bureaucratic aspects, mobility or physical products of specific help for forms of disability) is therefore the type of support most searched for within the current online debate of the Italian disabled community. This emerged over time through an increase in the importance and frequence of these topics at the expense of emotional and relational support topics, which in the past, particularly in the first few years after this forum was launched in the mid-2000s, represented the main and overall most popular type of content. One important question to ask her is whether relational content, having 'disappeared' from a popular forum like Disabili.com, has moved to other online venues and, if so, where. Crucially, when discussions emotional relationships dominated this forum there were also few alternative platforms where those discussions could take place. In the mid-2000s, social media platforms were in their infancy, had many accessibility problems, and were typically unresponsive to the grievances of access and accessibility advocates (Ellis & Kent, 2011). This made forums, given their relative accessibility, a privileged online venue for disabled internet "pioneers" who could afford a connection. Inevitably, however, this also constrained the disability community within sites with simpler interfaces and fewer interactive functionalities. Thankfully, accessibility has come a long way since then and today there is no shortage of alternatives to generalist forums and perhaps this type of discussion has moved to other platforms that offer more valuable 'affordances' for disabled people to engage in these topics. It would be interesting to map the trajectory of "relational support" conversations beyond forums in the disability community to better understand where they have migrated to and why.

Another key finding concerns the fact that, in the discussion forum, references to physical disabilities – particularly mobility problems – are clearly prevalent over other types of disabilities, which are scarcely mentioned. This seems to reflect a traditional 'disability hierarchy' (Haller, 2000; Rees et al., 2019) that has been traced in the mainstream media where people with physical disabilities (especially wheelchair users) are presented as being at the 'top' of a 'pyramid' of media attention. A future exploration could be to reflect on the reasons that lead to this communicative 'hierarchy'. Perhaps, the persons with other types of disabilities prefer other platforms or forums, maybe more specific; or they do not consider this forum a useful tool for other reasons; or they find it more difficult to express themselves in a 'public' forum because of a perceived form of internalised stigma. Finally, it is also possible that there are specific access barriers to these communicative contents concerning mental, sensory, and other tyes of disabilities, which are therefore excluded from the debate. It would be interesting, in a future analysis, to further explore the data to answer these questions. Likewise, it would be useful to try to check for the presence and role of any 'super users' or

'expert users' in this forum. 'Super users' (i.e. frequent and experiences posters who, however, are not official forum or group admins) have been shown to perform essential roles and be central to the flourishing – or failure, when they are not present – of other 'everyday' online conversation spaces such as parenting and financial advice sites (Graham, Wright; 2014; Wright, 2017; Halpin et al., 2018), and it would be interesting to examine their potential role in online disability communities too.

Overall, whether this forum can be considered a true 'community' (in the sense of the 'gemeinschaft' defined by Tönnies in 1887) remains an open question at this point. Our initial analysis shows that Disabili.com's forum is certainly a place where relational messages and (above all) information are exchanged, but it does not provide sufficient evidence of deep and on-going relationships being generated.

References

Anderson, M. and A. Perrin (2017). <u>Disabled Americans are less likely to use technology</u>. Washington, DC, Pew Research Center.

Cole, J. and J. Nolan (2019). GimpGirl: Insider perspectives on technology and the lives of disabled women. <u>The Routledge Companion to Disability and Media</u>. Ellis, K., Goggin, G., Haller, B. and R. Curtis. London, Routledge: 233–242.

Dobransky, K. and E. Hargittai (2016). "Unrealized potential: Exploring the digital disability divide." <u>Poetics</u> (58): 18–28.

Ellis, K. and M. Kent (2011). <u>Disability and new media</u>. London, Routledge.

Ellis, K. and M. Kent (2016). <u>Disability and social media</u>: Global perspectives. Milton Park, Taylor & Francis.

Finkelstein, V. (1980). <u>Attitudes and Disabled People</u>. New York, World Rehabilitation Fund.

Goggin, G.M. and T. Noonan (2006). Blogging disability: The interface between new cultural movements and internet technology. <u>Uses of Blogs</u>. Bruns, A. and J. Jacobs. New York, Peter Lang.

Goggin, G. and C. Newell (2007). "The Business of Digital Disability." <u>The Information Society</u> 23(3): 159–168.

Graham, T. and S. Wright (2014). "Discursive Equality and Everyday Talk Online: The Impact of 'Superparticipants'." <u>Journal of Computer-Mediated Communication</u> 19 (3,1): 625–642. https://doi.org/10.1111/jcc4.12016

Haller, B. (2000). If they limp they lead? News representations and the hierarchy of disability images. <u>Handbook of Communication and People with Disabilities: Research and Application.</u> Braithwaite, D. and T. Thompson. Mahwah, NJ, Laurence Erlbaum: 273-288.

Halpin, D., Vromen, A., Vaughan, M. and M. Raissi (2018). <u>Online petitioning and politics: the development of Change.org in Australia</u>: 428-445. https://doi.org/10.1080/10361146.2018.1499010

Istituto Nazionale di Statistica - ISTAT (2019). <u>Conoscere il mondo della disabilita: Persone, relazioni e istituzioni</u>. Rome, Istituto Nazionale di Statistica.

Oliver, M. (1990). <u>The Politics of Disablement</u>. Basingstoke, Macmillan Education.

Parsloe, S.M. (2015). "Discourses of disability, narratives of community: Reclaiming an autistic identity online." <u>Journal of Applied Communication Research</u> 43(3): 336-356.

Parsloe, S.M. and A.E. Holton (2018). "#Boycottautismspeaks: Communicating a counternarrative through cyberactivism and connective action." <u>Information, Communication & Society</u> 21(8): 1116–1133.

Qu, Y. (2021). "Is the internet the game changer? Disabled people and digital work in China." <u>Disability & Society</u> 1(21).

Satari, A. (2021). <u>The mobile disability gap report 2021</u>. London, GSMA.

Shakespeare, T. and N. Watson (2001). The social model of disability: An outdated ideology? Exploring theories and expanding methodologies: Where we are and where we need to go. Barnartt, S.N. and B.M. Altman. Bingley, Emerald Group Publishing Limited.

Stetten, N.E., LeBeau, K., Aguirre, M.A., Vogt, A.B., Quintana, J.R., Jennings, A.R. and M. Hart (2019). "Analyzing the communication interchange of individuals with disabilities utilizing Facebook, discussion forums, and chat rooms: Qualitative content analysis of online disabilities support groups." JMIR Rehabilitation and Assistive Technologies 6(2): e12667.

Tönnies, F. (1887). Gemeinschaft und Gesellschaft. Lipsia, Verlag di Fues.

Trevisan, F. (2022). "Beyond accessibility: Exploring digital inclusivity in US progressive politics." New Media & Society 24(2): 496-513.

Trevisan, F. (2020). "'Do You Want to Be a Well-Informed Citizen, or Do You Want to Be Sane?' Social Media, Disability, Mental Health, and Political Marginality." Social Media + Society 6(1).

Tsatsou, P. (2020). "Digital inclusion of people with disabilities: a qualitative study of intra-disability diversity in the digital realm." Behaviour & Information Technology 39(9): 995–1010.

Vicari, S. and F. Cappai (2016). "Health activism and the logic of connective action. A case study of rare disease patient organisations." Information, Communication & Society 19(11): 1653–1671.

World Health Organization (2011). World Report on Disability. Geneva, World Health Organization.

Wright, S. (2017). "The impact of 'super-participants' on everyday political talk." Journal of Language and Politics 17(2): 155–172. DOI: https://doi.org/10.1075/jlp.17033.wri