

Translation in transit: what changes does digital information bring into translation work?

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Abstract

Introduction. *In this paper, we investigate consequences of digitalization of information sources and channels for translators on basis of their experiences and views. We aim to shed light on changes in their everyday work practices and the consequences for their professional identity.*

Method. *Interviews with four translators were followed up by a survey among members of Norwegian translator organizations, resulting in 236 completed questionnaires.*

Analysis. *Both quantitative and qualitative analyses were carried out on the data. Quantitative analysis of the survey data employed the statistical package SPSS, while the qualitative analysis of survey and interview data was carried out by coding and categorizing verbal responses.*

Results. *The collected data reveals a radical change process in working conditions over the past decades, both concerning easier access to digital information sources and communication through digitalization. Digital information sources are now a main means to find information needed in translation. In addition, the digital communication tools have increased the communication between translators.*

Conclusion. *There seems to be an ongoing shift towards more mechanical translation based on alternatives identified and retrieved through digital resources. At the same time, there are extended possibilities of professional communication via digital media, which has profound importance to the sense of belonging to a profession.*

Keywords: translation, digitalisation, information behaviour, information practices, social media, workplace studies

Introduction

What happens when basic work tools in a profession, as well as professional communication, are digitalized? The world has turned into a global workplace, and you may be on different continents, at home or on a mountain hike, and still participate in a work community. This may result in fragmented workplace communities, as there is less need for permanent and expensive offices when tools, documents and professional communication all are at hand via pc, tablet or mobile phone (e.g. Spinuzzi, 2012; Leonardi, Huysman and Steinfield, 2013; Jarrahi and Thompson, 2017). When employees start performing their work mainly in digital environments, rather than in physical ones, the digital workplace becomes the regular one (Byström, Ruthven and Heinström, 2017). Financially, this will often be a gain (Global Workplace Analytics, n.d.), whereas reduced possibilities of face-to-face encounters and casual talks might instead decrease the creativity of a community (Oldham and DaSilva, 2015; Boman, Molander and Angmyr, 2017).

For most professions the digitalization has meant – at least initially – a change to a more fragmented professional work community. For some professions though, the digital technology has opened up possibilities for establishing closer professional communities and cooperation. One such profession is translating, where most translators traditionally worked alone, except for meetings with their editors or employers. Translators' working conditions has changed substantially due to the digitalization of information resources and Internet access. From the early 1990's and onward, computer-assisted translation (CAT) tools have been available (Christensen and Schjoldager, 2016), as well as on-line dictionaries, and a rapidly growing body of full-text databases. Additionally, social media tools has provided translators an opportunity to create fora for communication and networking, offering arenas for professional information, discussion and cooperation.

In this article, we investigate consequences of digitalization for Norwegian translators on basis of their experiences and views. We aim to shed light on both the practical, tangible changes in their everyday work practices and the more subtle consequences for their professional identity. To meet this aim we have formulated the following research questions:

1. How, and for what purposes, are digital resources utilized in everyday work by translators of different text categories?
2. In what ways do digital resources enact translators as a professional community?

After first addressing to the previous empirical and theoretical research with relevance to the role of information and its sources in work practices of translation, we describe the survey method applied for this study. Further, we present the results from a national survey in Norway, where we focus on how the digital information has changed the translators' work situation, both in respect to the way they perform their work on a daily basis and to their views on changes in the profession itself. We conclude with a discussion of our results in relation to the more general issues of workplace development and the role of digital information resources in late modern society.

Previous research on translators' information behaviour in a digitalized context

Several studies have been carried out concerning translators within the research field of information behaviour. Parts of this body of research are too old to reflect the digital revolution of information resources and communication possibilities now available to the translators. Some thirty-forty years ago, just to trace an existing translation was difficult and time-consuming, as described in several Aslib publications, for instance by Fleurent (1982) and Scott (1971).

Among the more recent publications in translation studies and in information science, of specific relevance to the present study, are studies on translators' information behaviour (White and Matteson, 2008; McDonough, 2007; Granell, 2015), and technological challenges to the profession (Séguinot 2007, Mossop 2006 and Jansen 2017). Granell (2015) comments that '*While there has been much discussion [...] about how translators make use of available ICT and information resources, [...] few studies have empirically investigated their use by this community of practice*'. (Granell, 2015, p. 1).

A decade ago, Séguinot (2007) draws a cross-disciplinary picture of professional changes due to technological development, which has challenged all of the communication professions. In comparison with the professional fields librarianship and journalism, the changes had '*not yet had the effect of reorienting the profession*' of translators (p. 186). This appears to have happened since then, and in a recent study of Jansen (2017), the author concludes that the myth of the literary translator as a lone wolf is no longer valid. In a survey among 150 Scandinavian literary translators, Jansen (2017) found that professional communication via digital fora was rated as highly important, and that translators welcomed cooperation and collegial support. Dam and Koskinen (2016) discusses the translation profession, its status, changes and challenges, where the consequences of the changing role of translation technology and networking among translators are at the centre. Mossop (2006) found that development of electronic resources are connected to increased demands for speed in translation work, as well as to changed focus; from creation of translations to retrieval of text from repositories.

Concerning the effects of information resources on translators' everyday work, Granell (2015) conducted a survey exploring the adoption of ICT by translators in the UK, including communication and translators' information search and retrieval. His study shows widespread use of search engines and online dictionaries, and variations in familiarity with other digital resources. White and Matteson (2008) conceptualize translation as a work task, and focuses on non-fiction translators' information needs and use of resources to meet these needs. Based on a qualitative focus group study, they find that translators use a wide range of resources and they detect a relation between the degree of task complexity and types of information needed.

A common feature in the research presented, is the dynamics between the challenges and the gains caused by digitalization, and the new ways of working that goes with it.

Theoretical approaches to professional work

Abbott (1988) distinguishes a profession from an occupation. While an occupation is organized around the changing work tasks it carries out, and around the control of the work, he defines a profession as *'exclusive occupational groups applying somewhat abstract knowledge to particular cases'* (1988, p. 8). One of the key trends that according to Abbott shaped occupational and professional organization in the 20th century was technology. From a 2018-perspective, one could argue that this is even more the case in the 21st century.

Susskind and Susskind (2015) go as far as claiming that technology development is the future end of professions, at least in the way we know them hitherto. According to them, professions share four overlapping similarities: special knowledge; admission by credentials; regulated activities; and a common set of values. In a print-based industrial society, no one had sufficient knowledge to cope with all the daily challenges in life. Professions with specialist knowledge grow to meet the needs of people's lives. In today's technology-based Internet society, the professions are questioned, because in the near future *'the professions in their current form will no longer be the best answer to those needs'* (Susskind and Susskind, 2015, p. 3). The authors see two possible outcomes, both related to development in technology. One possibility is a more efficient version of what we have today, where the professionals use new technology to optimize how they currently work. An alternative outcome, also advocated by Brynjolfsson and McAfee (2014) is that systems and machines, operating with or without people, will come to carry out a major part of tasks currently performed by traditional professions, such as doctors, lawyers, teachers and accountants.

In the research field of information behaviour, the role of information within different professions development has been addressed by many, there among Allen (1969) and Paisley (1968); two early examples of frameworks on how information related activities are created within the professions' social networks. They both situate a person in the context of professional work where information is enabled through ties to team members, work organization, professional field and society at-large. It is in these contexts where work related information is needed, sought and used, and the related practices generated. Taylor (1991) viewed professions in the frame of Information Use Environments (IUE) formed by sets of people, problems and resolutions in particular settings. He argues that information related activities can be traced back to these environments with their own mutually shared understandings about who form and belong to the (professional) group, what are the kinds of problems to be addressed and solutions preferred, and how the setting ought to be organized, including access to information.

Several models have continued to emphasize the idea of socially constructed information related activities as part of work practices, indicating that information has a role in social practices (Cox, 2012). Jarrahi and Thompson (2017) as well as Byström *et al.* (2017) recognize the potential of digitalization of information and information sources as a significant constituent for reframing professional practices. They suggest that the digital workplaces do not only change the ways information is accessed for work, but also challenges and potentially changes how the work is understood as a shared practice. This may even have consequences for how professional identities are reformed.

In sum, researchers in various fields seem to agree that technological development influence the way professions develop. However, this development is considered both as a risk and as inevitable and with great beneficial potential (Brynjolfsson and McAfee, 2014; Susskind and Susskind, 2015). Digitalized information and its sources can be seen in the core of this development (Jarrahi and Thompson, 2017; Byström *et al.*, 2017). We assume that translators can be included in the lists of professions in the midst of this development.

Method

The aim to understand changes caused by digitalization on a specific profession, suggests large scale data collection. To gain some initial knowledge and to fine-tune our survey questionnaire we started by a small number of interviews. The study thus made use of mixed methods, applying a quantitative survey following up the qualitative interviews, as outlined by Creswell (2009), in order to get a rich body of information about translators' views on, and experiences of digitalized information resources. Whereas interviews with a few individuals do not provide comparable data, they contribute to a deeper understanding of a phenomenon (Kvale, 1996). A questionnaire with boxes to check provides simple, tangible data to be statistically processed. However, such closed questions have general methodological weaknesses, as there will always be a risk that none of the alternatives matches fully the respondents' real opinions, and the questions may be interpreted in different ways. Combining open-ended questions with multiple choice in a questionnaire diminishes the risk of missing important data.

Procedure

As a first step, individual interviews with four experienced translators were conducted for a purpose to get an understanding of their work situation, and to feed in to the designing of the survey questionnaire. The four informants (two men and two women) were members of different translators' associations and they worked with a variation of texts, ranging from Shakespeare's dramas to technical specifications. Their age varied from mid-forties to mid-sixties. The semi-structured interviews lasted from 30 minutes up to one hour, and focused on their individual information seeking and use as well as the changes they had experienced in their career due to digitalization of information sources. Three of the interviews were performed face to face, and transcribed subsequently, while the fourth was conducted via e-mail. Where relevant, these data were also used to enrich the survey data. The male, respective female informants are in the following referred to as Inf M 1-2 and Inf F 3-4.

The second step was to develop a survey from the information in the interviews as well as from previous research. A questionnaire containing 15 questions consisted of both multiple-choice questions and one open-ended question. The introductory questions obtained information about gender, age and length and type of career as translator. They were followed with questions on their use of digital information sources and communication fora. The concluding questions (including the open-ended question) concentrated on their experience of changes in translation work due to digitalization. The questionnaire was tested with one translator and peer-reviewed before use.

In order to reach out to the majority of translators in a cost-effective way, we used a Norwegian electronic survey tool, *Nettskjema*. The survey was distributed as a link in an e-mail to all members of the four major Norwegian translators' associations via the associations' administrations in November 2016. Membership of a professional association indicate a professional status (Abbott 1988, Pym, Orrego-Carmona and Torres-Simón, 2016), and was considered the best way of reaching out to the majority of Norwegian professional translators. The four associations included are: NORFAG with 110 members solely translating non-fiction, mostly technical texts; Association of Government-Authorized Translators in Norway (STF), with approximately 200 members who translate legal and other official documents; The Norwegian Association of Literary Translators (NO) with 330 members translating literary fiction; and finally, The Norwegian Non-fiction Writers And Translators Association (NFF), with 319 members. NFF count an unknown, but substantial share of members from the three other associations mentioned. The associations were not able to check the number of double memberships and therefore the exact response rate for the survey remains unknown. We received 236 completed questionnaires by the end of February 2017, and estimate a response rate of approximately 40 %. Norway is a small country, and the total number of translators is thus small. In order to keep the answers anonymous, the respondents were not asked to which association they were affiliated, neither of their place of living. Comments quoted in the following are numbered R1- R236 according to the SPSS data set. This research project has gained ethical approval from the Norwegian Centre for Research Data.

Data and analysis

The main data in the present analysis consists of the qualitative data from the open-ended question in the survey. The question was: *What has the digitalization meant to you as a translator? What positive or negative changes has digitalization caused for you and your work situation?* The responses comprise 232 comments, which contained 415 topics in total, that is, one comment could include one or several separate topics. These responses were transmitted to the software tool SPSS for statistical analysis, and the textual data were coded and categorized inductively. The main themes identified are Efficiency of work, Quality of work, Professional contact and Working conditions. These themes will be used below as a framework for presenting the findings. A random sample of 10 % of the comments was subjected to dual coding for validation, resulting in an agreement rate of 87 %. The total material subjected to analysis thus consists of statistical survey data as well as qualitative, categorized accounts from the survey and occasional additions from the interviews. The (uncoded) interview data plays a minor, supportive role in the analysis that mainly rests on the survey data. The statistical findings presented below were tested and found statistically significant.

Characteristics of respondents

Out of the 236 completed questionnaires, 57 % were from women, 43 % from men. A little more than 60 % are full time translators, more so among women. The respondents' age was high; 51 % of the respondents were between 50 and 69 years old, and as many as 23 % were 70 years or older. One single respondent was under the age of 30.

The respondents divide themselves on the following kinds of translation work: 47 % work mainly with fiction, 38 % translate general non-fiction, 24 % translate technical texts, 10 % translate scientific texts and 17 % have ticked off for 'Other'. Quite a few work with both fictional and non-fictional texts.

Findings

Table 1 displays a high-level overview of how the survey data falls into themes identified in the analysis. The textual responses to the open-ended question in the survey questionnaire indicate that most respondents are occupied with efficiency-related topics connected to positive or negative effects of digitalization on their work. The remaining of the results section addresses each theme in detail.

Category	Frequency	Percentage
Efficiency of work	218	52,5
Quality of work	81	19,5
Professional contact	34	8
Changes in working conditions	40	9,5
Other	42	10,5
Total	415	100

Table 1. Frequency of coded comments pertaining to four overarching categories

Efficiency of work

Among the 218 responses concerning efficiency, the majority commented on advantages of using digital information sources, such as saving time, the simplicity of searching information and the broad range of available information sources: *'Maybe one gets a little lazy, now everything is so easy'* (Inf F 3), *'Faster to collect information'* (R68) and *'Source material has increased substantially'* (R65).

Seven respondents commented on internet as a *time thief*, limiting the efficiency, such as: *'Easy to spend too much time on digital media, getting lost in matters of interest, which takes up productive time'* (R7).

Looking at the kind of digital resources in use by the translators, we find that the resources they use relate to what kind of texts they are working with. Among the 10 % users of full-text collections,

translators of fictional texts dominated. All of the translators use digital dictionaries and/or search engines, but only 22 % reports use of CAT tools. These were mainly used by translators of technical texts, but even translators of all the other text categories use CAT tools.

I've been working as a translator for 10 years, and have not much knowledge of translation before digitalization. But it would be a totally different reality without CAT-tools (have hardly translated without it), Internet and digital dictionaries, online encyclopaedia etc. (R8).

When asked if they use paper-based information sources, age plays a role, but the digital resources are generally the preferred ones. The percentage of translators who prefer paper-based sources increases significantly by age, from 7 % among those up to 49 years old, up to 24 % among those over 70. However, both younger and older respondents appreciate the increased working speed that online sources offer: *'Work gets done faster. Things may be looked up and search for at once. Earlier on, you had to go to the library and find – not always good – solutions'* (R203).

Still, as many as 64 % reported occasional use of paper-based sources. According to the interviewed translators, paper-based dictionaries in some languages are more comprehensive. Or as one comment from the survey put it: *'I like looking up words in dictionaries, to get some variation in my work posture. Digitalization has made work more static'* (R24).

Professional contact

For professional contact with colleagues, the preferred fora are either the e-mail list O-ringen (60 %) or Facebook (50 %) or both. O-ringen is a Norwegian mailing list created by translators of fiction, but now open for translators of all kinds of texts. 28% preferred other, unspecified mailing lists. Twitter or blogs are rarely used for professional contact, only by one respectively four respondents. The majority follow their preferred fora every day or every week, which indicates that these translators stay in relatively close contact with their colleagues.

Whereas diverse communication fora for translators were viewed as helpful in translation work to a large or to some degree by the majority of respondents (55 %), women appreciated these fora most; 22 % of the female translators expressed that they had been helpful to a large extent, whereas only 16 % of the men were of that opinion. Even more striking, only 7 % of the women indicated that these communication fora had been not at all helpful, whereas 23 % of the men stated this, as shown in Table 2. In the four interviews, as well as in the survey, the translators pointed out the increased possibilities of getting help from colleagues: *'Discussions with colleagues over the Internet is a great advantage'* (R57), and:

People are very, very good responders. There is a steady group of people out there who are active in giving response, these people are very knowledgeable, well intentioned, and do genuinely want to help others (Inf F 3).

N=236	To what extent has digital communication fora been helpful in your work?	To a large extent	To some extent	To a little extent	Not at all	Total
% within gender	Women	22	36	35	7	100 %
	Men	16	35	26	23	100 %
	Total	19	36	31	14	100 %

Table 2: Helpful professional communication

Differences in responses to this question, are not relating to the categories of texts translated, however, there is a tendency that younger translators have experienced this communication as more helpful than

the older ones.

The coded material included 34 comments on professional contact, of which 28 focused on the gain in communication possibilities through digital fora. A few mentioned the simplified way of getting in touch with employers and authors. Only a handful hinted to besserwisserism and negative experience with these discussion fora: *'Good opportunity to seek advice from other colleagues, important though to accept questions on different levels – we all lacked experience once'* (R182).

The respondents confirm that digital communication enact professional community, as 33 % respectively 34 % out of the 236 reports that use of digital communication has strengthened the sense of being part of a professional community either to some or to a large extent. This is most apparent among translators of technical texts and translators of fiction.

The use of digital communication fora were reported to be significantly more important to full-time translators than to part-time translators when it comes to the sense of being part of a profession. Whereas only 20 % of part-time translators answered that these fora to a large extent strengthened their sense of belonging to a profession, 41 % of the full-time translators did, and about 1/3 of each group answered: to some extent. The comments expand on this:

*It is vital to seek advice from others, and to communicate with colleagues. This gives a sense of belonging and loyalty to the profession, and even possibilities of coming together, both virtually and **real*** (R23).

Another respondent underline the experience of community: *'It is good to be part of a large community on the Internet in an otherwise rather lonely job'* (R123).

One of the informants concludes: *'I feel that the - sort of - pride of being a translator is more prevalent today, maybe because communication is simplified and we can more easily socialize'* (Inf F 3).

Quality of work

The widespread use of digital information sources appears to have a high impact on the quality of the translation work. The vast majority (79 %) reported that the increased use of digital information sources has improved the quality of translations. Only two individuals out of the 236 respondents disagreed entirely. 20% checked for: *'No significant difference in quality'*, all of them among the translators with the longest careers. One male translator of fiction stated that earlier on, he used to search for information by personal contact, but digitalization has removed this fun part of his work. *'Of course, it used to take more time, but the answers were better! Quality has decreased a little, but efficiency has increased'* (Inf M 2).

From the coded material, 81 comments were related to quality. 52 commented on the increased possibilities of quality control, especially in keeping up a consistent terminology, for example in this comment: *'More background information contribute to a more reliable, more convincing translation'* (R77), followed up by another:

In addition to Google, online dictionaries [...] which often works as synonym dictionaries are extremely important, and for technical translations they are vital for a good result – or for any result at all. Most important, though, for having anything translated, are translation software programs (R131).

A great deal of comments refer to the possibility of both learning about a topic and relating to context of the translated work:

Digitalization has made not only dictionaries, but also a broad range of sources in different languages easily accessible. Of equal importance is that digitalization has made it easy [...] to stay updated on cultures and languages in faraway countries, even when you cannot travel there physically – you may read newspapers, follow TV and radio and observe informal language in use on social media. Various cultural/historical/political references may also be easier to find out on, if you for instance find a reference to an old movie, you can quickly find a clip from it on YouTube (R131).

Changes in working conditions

The majority of respondents found that translation work has changed to a high (67 %), or to some (26 %) degree due to digitalization.

Among the 40 comments from the coded material on changes in working conditions about one half of them deal with the frustration that positive experiences of saving time, are counterbalanced by employer's demands for quicker delivery: *'...deadlines are more tight because the publishers know the work takes less time'* (R203).

Eight respondents mention the advantage of being able to work independent of location. This was an important point for two of the interviewed translators as well. As stated by a female informant: *'I can work wherever I want in the whole world, as long as I have an Internet connection'* (Inf F 3).

Digitalization has even expanded the job market to some translators, like this informant who work with technical texts: *'You can take on a greater variety of jobs than before, because you have access to such large resources when it comes to terminology'* (Inf M 1).

When communication between employer and translator change from face-to-face meetings to e-mail dialogue, it follows that the individual translator need to increase the promotion of his or hers skills. Without the meetings with the editor or other kinds of employers, the personal relationship might fade, and faces and names get forgotten. This kind of alienation is a risk that cling to any kind of dislocation of working communities. As one translator of fiction put it: *'Earlier on, I went to publishers' parties for having a good time. Nowadays, I go there because it is important, I need to remind them that I exist'* (Inf M 2). Another states: *'Besides, digitalization of the communication with employers has led to greater distance – one work for people one does not know, in another way than in the past'*. (R142).

The digital information, resources and communication fora have influenced the entire way of working, instead of just making individual aspects of the translation process easier: *'Quicker and in some cases safer access to sources and information. Easier to deliver and to get jobs. Much more simple to cooperate with copy editors, proofreaders and employers'* (R105).

Several respondents go as far as considering it impossible to work as a translator without the digitalized work conditions: *'It is alpha and omega. I don't see how working as a translator would be possible without the Internet'* (R61).

Discussion

The following two quotes summarizes the main conclusions from the data:

Everything is easier (R133).

Digitalization has been going on for so long now and it had already started when I was hired as a translator by an IT company at the end of the 80ies. Don't have any clear opinion on the differences between then and now, if

anything, it must be the social media that is rather new (R149).

Some of the digital information resources and tools are already old and common, meaning that changes caused by digitalization has been an ongoing process for many years. Gradually, more sophisticated tools and changes in ways of working have been introduced, including most recently social media. Our material clearly shows a change in work practices where previous difficulties in search of correct terminology and contextual information, are now minor problems, and replaced by other problems, such as topical distractions and pressure for quicker delivery.

'I really don't understand how we made it before Google' (Inf M1) is a quote that represent typical response in the open-ended question of the survey. If freely available, automated translation services turns out to be the main tool of the profession, this indicates a fundamental change, and can be related to Mossop's (2006) point about the mental changes deriving from translation as inventing to translation as retrieval of text. From here, the step is not huge to the prediction of disappearance of work tasks (cf. Susskind and Susskind, 2015; Brynjolfsson and McAfee, 2014).

The reason why information seeking is dominated by the free tools may be explained by the nearly 70 year's old Zipf's principle of least effort. Many information-seeking studies have shown that people, especially in known situations, are relying to the easiest available and usable information sources as long as they believe that an acceptable outcome is achieved (cf. Case, 2016, p. 191). Choices of least effort, like googling, is connected with the demand by employers for quicker delivery, stated more than a decade ago (Mossop, 2006) and commented upon by many respondents in the present survey, and dealt with in Granell's study (2015) as well.

On addition, our findings are in line with McDonough (2007) who found that the large number of digital networks focusing on translation *'demonstrates that formal and informal networks are playing an increasingly important role in the way the profession is practiced'* (2007, p. 811). Even Jansen's study indicates that contacts between colleagues through digital as well as face-to-face fora function as supportive and helpful networks for problem-solving in translation work. She found that the aspect of mutual support and sharing among translators was underlined (Jansen, 2017). One of the advantages of collective communication fora is the wide outreach, providing many, sometimes different answers to a question posed. This is underlined as a positive option by Jansen's informants as well as in the present survey. However, some translators' comments indicate a certain reservation about the quality of this communication. The overall impression from the survey is nevertheless, that these discussion fora are highly appreciated. This corresponds with a common finding in information seeking studies, which points out the strong preference of information coming directly from other people. Moreover, the *'use of other channels tends to be predicted by the social presence they offer, that is, how much they are perceived as being like a face-to-face conversation with another person'* (Case, 2016, p.159).

Both in Jansen's and in our study, the general attitude to the digitized world was that *'work was much more demanding and lonesome before the Internet'* (Jansen, 2017). Jansen's study showed that 90 % of the respondents answered that digital communication fora *'added value to their professional identity as being part of a community'* (p. 140). This corresponds fairly well with our findings, where more than 75 % of the full-time translators find that these kinds of communication fora have strengthened their sense of belonging to a profession. In Jansen's study as well as ours, the respondents emphasized the benefits of the willingness to help via digital communication fora.

Limitations

This study is carried out in a country of a relatively small native language base and with high degree of technological availability as well as a wide range of digital resources. This may infer bias to transferability of the results. However, the main results are in line with previous studies. One specific limitation in the present study is the diversity of the respondents, which lead to certain differences in how they perceive their work and their employers. Even so, they have in common similar work tasks and information requirements. Another, more technical limitation was that the distributed

questionnaire lacked an option *not relevant* to some of the questions, which may have resulted in a minor skewness to the collected data.

Conclusion

The present study shows that digital information resources are widely used, and highly appreciated by translators. Both the survey and the interviews picture a radical change in working conditions over the few past decades, both when it comes to tools, access to information sources, and to professional communication. It is further evident that the extended possibilities of professional communication via digital media is of significant importance in translators' sense of belonging to a profession.

Our first main conclusion is that these changes indicate a somewhat more mechanistic outlook on translation work today, where identifying suitable wording from the host of alternatives offered in the public internet replaces the more original creation of translations. This is subtly detectable in many of the quotes and more transparent in this single comment: *'I have not been translating for a long time – it was not an occupation, but a political tool. These days I write books myself'* (R66), as if the mission of the profession had changed footing. It seems that the role of being an active mediator of insights and experiences through expressions by which the translator has an intimate ownership to the content shared with the original author, have altered to a more passive role of instrumentally replacing words in one language to words in another language.

Our second main conclusion concerns the increased collegiality brought upon the translator communities by the social media tools. Translating used to be a profession of many connections to mainly other professions involved one way or another in translation work, such as authors, publishers and editors. Connections to other translators took place in diverse events, but only few had contacts with other translators in regular basis. This appears to be something that has changed; whereas the translators now have more possibilities to connect to each other by social media tools, links to other professions are not as regular any more.

To conclude, translators form one profession in a range of others, where work tasks and professional communities are deeply changed and even challenged because of digital information sources. Whereas the consequences of digitalization have led to primarily positive modifications thus far, the future automation is likely to require even more profound changes, and it may even challenge the entire profession. We believe that the translators' case sheds light on more generally shared issues concerning development of workplace and information practices as the result of digitalization. Further research into translators' as well as other professions' changing information practices due to digitalization is a much needed and intriguing topic from the perspectives of both information and professions. A recurrent, important question to information studies is to get a better understanding of how and why certain information and its sources are selected and used. How the role of information (and its sources) changes the foci of professions and professional identity is of equal constant interest for the studies of professions.

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