**Information:**

Interview conducted with Interviewee 11 (male; works in Higher Education)

39 minutes

Language spoken: Portuguese

Automatic transcription done with the software Happy Scribe, and checked by a coder.

Translations to the interviewee’s responses are provided in square brackets in grey.

**Follow-up to the survey on the use of machine translation in health contexts**

**Researcher:** Thank you again for accepting to participate in this interview. As you already know, this is a follow-up interview to the questionnaire on the use of machine translation in healthcare in the Netherlands. You replied to this questionnaire earlier this year. Let me start by reminding you that this interview is being recorded. The data collected will be anonymized and analyzed together with other participants’ data. The recording itself will never be published or shared, and it will be deleted as soon as it is transcribed and anonymized. You are free to request a copy of the transcription. In the interview itself, we will invite you to go over potential scenarios regarding the use of technology - specifically, machine translation like Google translate or any other translation system on your phone or device - in healthcare contexts, like when you receive an invitation letter to get vaccinated or when you go to the doctor, huisarts.  The goal is to understand how machine translation can be used and what are the main challenges or opportunities when using it. We aim to create free training for users of machine translation like yourself in order to better support communities in these situations. The scenarios that we will show you are fictitious. They are potential scenarios or stories. The focus is on what you think a person would do if they were in this situation. Discuss anything that comes to mind or that you would like to share. We just ask you not to share confidential information about yourself.  If at any point, during the interview, you feel uncomfortable and you want to pause the interview, please just let us know. We can rephrase the question or stop the interview altogether. You can leave at any point during this interview. Any questions or concerns?

**Participant:** Tá bom. [Okay]

**[STAGE 1 SLIDE 2]**

**Researcher:** I will start now by reading the first scenario that you can also see on the screen.“Two years ago, Manuel moved to the Netherlands from Portugal. It was right amid the pandemic, and he moved to take up a position at a new company in Rotterdam. Manuel is a native speaker of Portuguese, and he also speaks English. He has taken two Dutch courses online, so he understands and speaks rudimentary Dutch. For example, he can ask for a drink or have short conversations with neighbors, but not enough to feel fully comfortable speaking Dutch fluently in all situations. In 2021, he received a letter from the RIVM inviting him to get vaccinated against COVID-19. The letter is in Dutch.” What do you think about this case?

**Participant:** Eu acho que é o Manuel é um sujeito bem aplicado de ter, enfim, de ter tido tempo de fazer dois cursos de holandês online. Porque... digo isso porque a Holanda me parece um país muito, muito receptivo para o não falante de holandês, não é? Então, à medida que, e essa é a parte da minha experiência, mas à medida que você chega no país, é muito, muito fácil se virar sem falar holandês. Então é isso que eu digo daqui.[I think that the fact that Manuel has had the time to take two online Dutch courses makes him a very hard-working guy. Because... I say this because Holland seems to me to be a very, very receptive country for non-Dutch speakers, doesn't it? So, as soon as, and this is the part of my experience, but as soon as you arrive in the country, it's very, very easy to get by without speaking Dutch. So that's what I say from here.]

**Researcher:** What do you think Manuel can do in this situation with the letter?

**Participant:** Acho que se eu estivesse no lugar do Manuel e partindo do suposto que ele trabalha numa empresa em Rotterdam, eu levaria essa carta pro trabalho e pediria ajuda de algum colega. Caso o Manuel não, enfim, não esteja indo ao escritório porque, enfim, covid, talvez as pessoas estivessem trabalhando online, eu imagino que o Manuel teria, como fiz eu e minha companheira várias vezes, usado o Google Translator no celular com a foto e que produza uma tradução aí bem honesta. Ou até usado o... Geralmente as cartas, isso eu acho bacana também, as cartas que eu recebo em particular de autoridade da Holanda, por vezes tem no finalzinho um box fazendo um breve resumo em inglês ou onde você pode conseguir mais informações, às vezes até tem um QR code que você consegue usar para, enfim, ter acesso ao comunicado.[I think that if I were in Manuel's shoes and assuming that he works for a company in Rotterdam, I would take this letter to work and ask a colleague for help. In the event that Manuel isn't, well, isn't going to the office because, well, covid, maybe people are working online, I imagine that Manuel would have, as my partner and I have done several times, used Google Translator on his cell phone with the photo and produced a very honest translation. Or even used... Generally, the letters I receive in particular from authorities in the Netherlands sometimes have a box at the end giving a brief summary in English or where you can get more information, sometimes there's even a QR code that you can use to access the information.]

**Researcher:** E quando o [ANONYMIZED] utilizam o telemóvel com a app usam a do Google Tradutor? Foi isso que disse?[And when you use your cell phone with an app, do you use Google Translate? Is that what you said?]

**Participant:** Sim. Só o Google Tradutor.[Yes. Only Google Translate.]

**Researcher:** E tiram uma foto e depois usam a opção da câmara?[And do you take a photo and then use the camera option?]

**Participant:** Sim. Eu tenho mais dificuldade de usar o scan. A [ANONYMIZED] ela usa mais o scan que eu. Eu tenho um pouco de dificuldade ali, que às vezes você se mexe e o negócio sai da tradução. E, às vezes, dependendo da forma como está diagramado o texto, fica meio truncado, a tradução fica um pouco complicada. Aí eu muitas vezes o que eu faço é eu já jogo isso no Google Tradutor e ele gera um novo arquivo traduzido e tal, então...[Yes. I find it more difficult to use the scan. [ANONYMIZED] [My partner] uses the scan more than I do. I have a bit of difficulty there, because sometimes you move and it moves out of translation [it moves out of the text]. And sometimes, depending on how the text is laid out, it gets a bit truncated, the translation gets a bit complicated. So what I often do is throw it into Google Translate and it generates a new translated file, so...]

**[STAGE 2 SLIDE 3]**

**Researcher: “**Because the letter mentioned COVID-19 and vaccinatie, and Manuel had been waiting for more information on when and how he could get vaccinated, it was very important for him to understand the letter completely and thoroughly in all its detail. He tackles this by trying to read the letter top to bottom, sentence by sentence. The letter is hard to understand. He does not know many of the words used, and he feels increasingly nervous.” Why do you think Manuel feels this way?

**Participant:** Acho que o Manuel é uma pessoa um pouquinho metódica, e interessado em ter uma vivência da sua qualidade de expatriado, de expat, por mais completa que seja possível. E parte dessa experiência, especialmente acho que na Holanda, que é um país que, não sei se você vai concordar, mas tem uma tara pelas comunicações da burocracia e tal, a gente recebe muita carta pelo correio, não é? Fiquei impressionado. E, enfim, sinto alguma simpatia pelo Manuel em querer conseguir o completo, o mais profundo entendimento dessas comunicações, o que vai ser impossível.[I think Manuel is a bit of a methodical person, and he's interested in having an experience as an expat, as complete as possible. And part of that experience, especially I think in Holland, which is a country that, I don't know if you'll agree, but has a thing for bureaucratic communications and so on, we get a lot of letters in the post, don't we? I was impressed. And anyway, I feel some sympathy for Manuel in wanting to get the full, deepest understanding of these communications, which is going to be impossible.]

**Researcher:** Have you ever found yourself in a similar situation?

**Participant:** Em um ou outro episódio, sim, mas não de uma forma estendida ou continuada. Eu tenho a sorte e a felicidade de ter alguns amigos e tal, e amigas e colegas que respondem esse tipo de dúvida, enfim.[In one case or another, yes, but not in an extended or continuous way. I'm lucky and fortunate to have some friends and colleagues who answer these kinds of questions.]

**Researcher:** What would you recommend Manuel to do next?

**Participant:** Que usasse o Google Tradutor. Acho que sim. Raras vezes me senti, enfim, não contemplado ou com um domínio insuficiente do que o Google Tradutor trouxe ou ofereceu.[Use Google Translate. I think that is it. I've rarely felt left out or that I didn't have a good enough grasp of what Google Translate brought up or offered.]

**[STAGE 3 SLIDE 4]**

**Researcher: “**Manuel decides to use Google Translate. He opens the app on his phone, and using the camera, he scans the letter. It is rather challenging.” How would you say his user experience with the app is? What kind of problems do you think he might face with this technology?

**Participant:** Enfim, não saberia dizer, mas a mim é talvez seja um problema que ele pudesse enfrentar e não sei porquê eu geralmente prefiro sempre traduzir para inglês. Tenho um pouco de receio de que a tradução direta do holandês para o português possa gerar mais, enfim, algumas truncagens na tradução, algumas coisas não satisfatórias e tenho esse hábito de sempre fazer para o inglês, assim, 90% das vezes eu traduzo direto para o inglês.[Anyway, I couldn't say, but for me it's perhaps a problem that he could face and I don't know why I usually always prefer to translate into English. I'm a bit afraid that translating directly from Dutch into Portuguese might generate more, well, some truncations in the translation, some unsatisfactory things and I have this habit of always translating into English, so 90% of the time I translate directly into English.]

**Researcher:** E chegou aí porque alguém lhe disse ou porque foi por experiência?[Did you get there because someone told you or from experience?]

**Participant:** É, acho que eu não me lembro, mas é meio que acho que é uma função, é uma... Ah, tem a ver com o ofício. Já há muitos anos que eu leio muito inglês por conta do trabalho e tal. E algumas vezes que precisei fazer traduções de documentos e tal, acho que nem lembro se tinha disponibilidade de uma tradução para o português. Mesmo que eu não tenha um entendimento muito profundo disso, eu sei que a qualidade vai ser sempre melhor em inglês, como as tecnologias funcionam.[Yeah, I don't think I remember, but I think it's kind of a result, it's a... Oh, it has to do with the job. I've been reading a lot of English for many years now, because of work and so on. And there have been times when I've had to translate documents and so on, I don't even remember if a translation into Portuguese was available. Even if I don't have a very deep understanding of it, I know that the quality is always going to be better in English, the way technologies work.]

**[STAGE 4 SLIDE 5]**

**Researcher: “**Manuel is able to make an appointment for his vaccination. On the day of his appointment at the vaccination center, he goes to the counter, where he is asked in Dutch to present his ID and letter of invitation. He manages to understand this because the person on the counter makes a sign of the ID with his hand. Manuel is nervous. Next, he is asked to fill in a health questionnaire in Dutch.” What would you recommend Manuel to do next?

**Participant:** Eu recomendaria que ele perguntasse se não tem esse mesmo questionário disponível em inglês.[I would recommend that he ask if the same questionnaire isn’t available in English.]

**[STAGE 5 SLIDES 6-8]**

**Researcher:** “Because he has some knowledge of Dutch, and the first questions in the form do not appear to be difficult, such as *Naam,* *Achternaam*, Manuel tries to answer them in Dutch. On the second page, though, he reads three questions he does not understand. He does not understand questions 11, 12 and 13.”



**Researcher:** What would you recommend Manuel to do next?

**Participant:** Nesse caso, se ele entendeu as questões anteriores, talvez ele já tivesse percebido um padrão nessas perguntas. E o padrão é que você vai responder sempre "não". "Não, não, não, não, não, não, não, não, não, não, não". Porque eles estão perguntando de... Enfim, de doenças e condições que você precisa manifestar. Então eu faria isso, que eu responderia a todos "não", porque se você responder "sim" a alguma coisa, eles vão encarnar com você e você não vai poder tomar vacina e se o Manuel quiser, já tivesse. Sendo ele um pouco nerd, entende esse termo? Como me parece que ele é, talvez ele já tenha se informado o suficiente sobre a vacina e tenha entendido o que isso significa, esse questionado. Então, eu marcaria tudo "não", falaria para o Manuel fazer a mesma coisa.[In this case, if he understood the previous questions, perhaps he had already noticed a pattern in these questions. And the pattern is that you always answer "no". "No, no, no, no, no, no, no, no, no, no, no". Because they're asking about... Anyway, about illnesses and conditions that you need to manifest. So I would do that, I would answer "no" to every question, because if you answer "yes" to anything, they will bother you and you won't be able to get vaccinated and if Manuel wants to, he already has… Since he's a bit of a nerd, do you understand that term? As it seems to me that he is, perhaps he has already been informed enough about the vaccine and has understood what it means, this questionnaire. So I'd mark everything "no" and tell Manuel to do the same thing.]

**Researcher:** Have you ever found yourself in a similar situation?

**Participant:** Sim, eu me lembro desse questionário, mas eu me lembro de tê-lo em inglês. Acho que era a mesma folha, inclusive, que tinha... Enfim, mas eu me lembro de cumprir em inglês, de começar a ler as perguntas e depois só ir marcando "não, não, não".[Yes, I remember that questionnaire, but I remember answering it in English. I think it was even the same sheet of paper... Anyway, I remember doing it in English, starting to read the questions and then just ticking "no, no, no".]

**[STAGE 6 SLIDE 9]**

**Researcher:** “Manuel asks for help from the young man behind the counter. He asks in Dutch if he can explain what is “bloedverdunners of antistolling”,  “trombosedienst onder behandeling”, and “stollingsstoornis” by pointing at the form with his finger. The young man looks surprised. He looks at the next counter, and it is empty. He looks behind, and everyone seems busy. He then tries to start a sentence a couple of times and finally says in English that these are diseases.”What would you recommend Manuel to do next?

**Participant:** Eu recomendaria que ele respondesse “não”.[I would recommend that he answers "no".]

**Researcher:** Have you ever found yourself in a similar situation?

**Participant:** Não tem nada que me salte à memória. Não no sentido de vacinação, mas talvez no GP, me lembro de preencher alguma coisa assim. E tem uma vaga lembrança de fazer alguma pergunta para alguém inglês, alguém do consultório, da clínica. E, enfim, essa vaga lembrança de que a pessoa falou "faz tal coisa" ou... Isso aqui, assim, insanoou a minha dúvida de um jeito que não precisou me explicar, entrar na minúcia do que estava sendo descrito.[There's nothing that springs to mind. Not in the sense of vaccinations, but perhaps the GP, I remember filling in something like that. And there's a vague memory of asking someone in English a question, someone from the office, from the clinic. And, finally, this vague memory that the person said "do such and such a thing" or... This, like this, clarified my doubt in such a way that I didn't have to explain myself, go into the details of what was being described.]

**[STAGE 7 SLIDE 10]**

**Researcher:** “Manuel turns to his phone, opens the Google Translate app, and types the words he does not understand.”In your opinion, is Manuel taking a risk by using Google Translate?

**Participant:** Não, nenhum.[No, none.]

**[STAGE 8 SLIDE 11-15]**

**Researcher: “**Manuel turns to his phone, opens the Google Translate app, and types the words he does not understand.”

We are going to use a scale for the following questions:

5 = to a very high degree

4 = to a high degree

3 = to a moderate degree

2 = to a low degree

1 = not at all

Is the scale clear?

**Participant:** Sim.[Yes.]

**Researcher:** What level of understanding do you think Manuel has when using the app? Does Manuel understand the text…

5 = to a very high degree

4 = to a high degree

3 = to a moderate degree

2 = to a low degree

1 = not at all

**Participant:** Diria 4.[I'd say 4.]

**Researcher:** What degree of risk of significant harm is Manuel exposed to if using the app? Is Manuel’s health at risk?

5 = to a very high degree

4 = to a high degree

3 = to a moderate degree

2 = to a low degree

1 = not at all

**Participant:** Não, 1.[No, 1.]

**Researcher:** What degree of trust should Manuel have in these translations? Should Manuel trust these translations?

5 = to a very high degree

4 = to a high degree

3 = to a moderate degree

2 = to a low degree

1 = not at all

**Participant:** Eu diria entre 3 e 4. Fazer um uso minimamente consciente, um pouco crítico da ferramenta que ela está sujeita a equívocos.[I'd say between 3 and 4. Make a minimally conscious, somewhat critical use of the tool because it's subject to mistakes.]

**Researcher:** What degree of vulnerability do you think Manuel has while using the app? Is Manuel at risk of being vulnerable?

5 = to a very high degree

4 = to a high degree

3 = to a moderate degree

2 = to a low degree

1 = not at all

**Participant:** Depende do grau de paranoia que o Manuel tem em relação à forma como as tecnologias operam e tal.[It depends on how paranoid Manuel is about the way technologies operate and so on.]

**Researcher:** Paranóia em relação ao quê?[Paranoid about what?]

**Participant:** Em relação a fornecer dados sobre a sua vida pessoal e nesse caso sobre a sua saúde.[With regard to providing information about your personal life and, in this case, your health.]

**Researcher:** E para si, de 1 a 5...[And for you, from 1 to 5...]

**Participant:** Entre 4 e 5. Mas assim, restrito nesse espaço do big data, enfim, desse tipo de risco. Não outros tipos de vulnerabilidades, enfim, não acho.[Between 4 and 5, but restricted to the context of big data, that kind of risk. Not other types of vulnerabilities, I don't think.]

**Researcher:** Are there any other comments about this scenario or related scenarios you can think of?

**Participant:** Eu fiz só um curso de holandês intensivo em julho, no verão, mas já estava vivendo há um ano na Holanda desde então. Então, como eu disse, acho que você também deve concordar que é muito fácil ficar sem falar holandês. Mas acho que o terreno onde eu mais senti falta, eu e a [ANONYMIZED] e tal, era no supermercado. Então, nesse lugar, o Google Tradutor foi muito importante. À medida que a cada semana e tal, a cada mês que a gente tava morando e tal, tinha mais domínio do supermercado. Então, me lembro de que no supermercado era onde a gente sempre usava essa ferramenta para saber exatamente o que eu queria, com o que aquilo era. E aí também entra a dificuldade do inglês, também, porque é também a maior parte da língua que eu tenho bem menos domínio do que, sei lá, na escrita acadêmica, por exemplo, em inglês, quando você vai fazer lista de ingredientes e de questões, às vezes você só sabe a palavra em português, que inclusive a minha palavra deve ser diferente da sua, de [ANONYMIZED]. Então, na parte de groceries e fazer supermercado, acho que mais fiz uso disso.[I only did an intensive Dutch course in July, in the summer, but I'd already been living in Holland for a year since then. So, as I said, I think you might also agree that it's very easy to get by without speaking Dutch. But I think the place where I missed it the most, me and [ANONYMIZED] and all, was the supermarket. So in that place, Google Translate was very important. Every week and so on, every month that we were living there and so on, I had more control over the supermarket. So I remember that the supermarket was where we always used this tool to find out exactly what I wanted and what it was. And then there's the difficulty of English, too, because it's also the biggest part of the language that I have much less command of than, I don't know, in academic writing, for example, in English, when you're going to make a list of ingredients and things like that, sometimes you only know the word in Portuguese, which even my word must be different from yours, from [ANONYMIZED]. So, when it came to groceries and supermarkets, I think I made the most use of this.]

**[Training - follow-up questions – SLIDES 16-17]**

**Researcher:** Before we end the interview, we also wanted to ask you what sort of training on using these machine translation apps you would find helpful.

What type of information on machine translation would make your life easier when using these apps in health contexts?

For instance, do you feel you need more instructions on how to use the apps? Can you give us an example?

What about information about how to deal with the translations themselves? Do you have an example?

Would it be helpful to understand better the instances when machine translation is not advisable?

**Participant:** Não saberia, assim. Não saberia e acredito que também é muito fácil de se virar sozinho, especialmente no meu caso, a [ANONYMIZED], que a gente veio, a nossa mudança teve assistência da universidade, tal, é um contexto bem específico de migração, mas acho que para outros contextos que têm mais vulnerabilidade, que têm uma migração em outras condições, talvez um pouco menos de intimidade com as tecnologias seja bem relevante para conseguir se virar num novo país.[I wouldn't know. I wouldn't know and I think it's also very easy to manage on your own, especially in my case, [ANONYMIZED], we came, our move was assisted by the university, so it's a very specific context of migration, but I think that for other contexts that have more vulnerability, that have a migration in other conditions, maybe a little less intimacy with technologies is very relevant to be able to manage in a new country.]

**[Closing]**

**Researcher:** Thank you for participating in our research. Our times of analysis and publication are long, but feel free to write to us to obtain the results of this research. Otherwise, we will contact you with the results in due time.