

Institution: University College London		
Unit of Assessment: 26 – Modern Languages and Linguistics		
Title of case study: Improving conditions for subtitlers and increasing Netflix's subtitled content coverage		
Period when the underpinning research was undertaken: 2008-2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s): Jorge Díaz-Cintas	Role(s) (e.g. job title): Professor of Translation Studies	Period(s) employed by submitting HEI: October 2013-present (period of continuous employment 2008-present)
Period when the claimed impact occurred: October 2013 – September 2020		
Is this case study continued from a case study submitted in 2014? No		
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>Prof. Díaz-Cintas's research into subtitling has led to a pioneering approach to testing the linguistic and translational abilities of established translators and newcomers to the subtitling industry. In 2013 Díaz-Cintas was invited by Netflix to apply his research findings to the design and development of the first ever online subtitling test and indexing system, Hermes, capable of catering for 33 languages, including English. Hermes has had an impact on language service providers and test takers and its success has introduced a meaningful measure of a candidate's performance (Hermes number) that is correlated to underlying linguistic and translational abilities. This has led to Netflix, and the screen media industry more broadly, increasing their recruitment of new, highly skilled talent in an extensive and extended pool of languages. It has forged a more direct relationship between Netflix, language service providers and subtitlers, leading to an increase in subtitlers' financial remuneration, and has instigated the development of new university-level training courses in subtitling to meet the quality criteria set by Netflix and Díaz-Cintas.</p>		
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>Díaz-Cintas's research promotes and improves the provision of subtitling, with a special interest in safeguarding quality levels and developing appropriate curricula [R1, R5]. His international reputation solidified with the landmark <i>Audiovisual Translation: Subtitling</i> (with Aline Remael, 2007), which has catalysed 50 other journal articles, book chapters and edited books since 2008 [R2-4] and the more recent <i>Subtitling: Concepts and Practices</i> [R1]. Díaz-Cintas's work offers detailed and thorough analysis of subtitling, both from a theoretical and technical perspective. Instigated by the perceived decline in quality standards in the field and the dearth of qualified professionals, he developed a pioneering approach to testing established translators and newcomers to the subtitling industry and proposed a set of guidelines to guarantee quality subtitles [R3]. This has become a particularly pressing issue in the context of the exponential growth of audiovisual translation (AVT) in general, and subtitling in particular, due to the advent of digital technology and the mushrooming of channels and video-on-demand (VOD) platforms that have opened up opportunities for programme makers to sell their titles to new markets [R1, R2]. One consequence of this fast-growing global demand for content that needs to be translated is the perceived shortage of qualified professional subtitlers in the industry and subsequent fall in quality standards [R1, R3]. The situation is compounded by the lack of formal subtitling training in many countries as well as the absence of accreditations, databases for qualified practitioners or common registration through professional organisations, which could capture the total number of expert media translators worldwide [R1, R5].</p> <p>Díaz-Cintas's research has shown that the linguistic, audiovisual and technical dimensions of subtitling are interconnected [R1, R3, R5]. He argues that validation of translation competence should take into account not only the candidates' linguistic knowledge of the foreign and mother tongues but also the socio-cultural environment in which language is used as well as the technical constraints that characterise the practice of subtitling [R1, R3, R5]. Díaz-Cintas [R1, R2, R4] argues that technology has been increasingly dictating the professional practice and reception of subtitling and that the same technology that is shaping commercial activity should</p>		

be also employed to train and test prospective subtitlers, who can then successfully operate in such demanding ecosystems.

To find a solution, Díaz-Cintas was approached by Netflix to apply his research findings to the design and development of the first online subtitling test and indexing system, capable of catering for 33 languages, including English. Díaz-Cintas was the Chief Coordinator of the 75 researchers from 40 countries involved in the project, who were recruited through his extensive network of connections. Traditionally, subtitling tests did not allow participants to recreate the same, or similar, environment as in the industry since test takers could not have access to the audiovisual material or specialist subtitling software. A cloud-based platform, known as Hermes, was developed by colleagues at UCL and beyond (both academics and professionals with the required language and subtitling expertise) in collaboration with Netflix's Content Localisation and Media Engineering teams. Díaz-Cintas produced a confidential report for Netflix concerning a testing experiment, including a pilot, which assessed users' experience of Hermes. Individuals were asked to complete a survey divided into: a personal section; parts 1 to 5: coinciding with each of the different test activities using the cloud-based subtitling tool; and part 6: to gauge their overall opinion of the test [R6].

The Centre for Translation Studies (**CenTraS**) was previously at Imperial College London and moved in its entirety to UCL in 2013. Díaz-Cintas's case study has received approval from Research England to include underpinning research undertaken during his period of continuous employment at UCL (2008 to present).

3. References to the research (indicative maximum of six references)

- R1.** Díaz-Cintas, Jorge and Aline Remael. 2020. *Subtitling: Concepts and Practices*. Abingdon: Routledge. [Monograph, can be supplied on request]
- R2.** Díaz-Cintas, Jorge. 2019. "Audiovisual translation in mercurial mediascapes", in Meng Ji and Michael Oakes (eds) *Advances in Empirical Translation Studies*. Cambridge: Cambridge University Press. [Chapter in peer-reviewed book]
- R3.** Díaz-Cintas, Jorge. 2014. "La questione della qualità nel sottotitolaggio", in Beatrice Garzelli & Michela Baldo (eds) *Subtitling and Intercultural Communication: European Languages and Beyond*. Pisa: Edizioni ETS, 290-312. [Chapter in peer-reviewed book, can be supplied on request]
- R4.** Díaz-Cintas, Jorge. 2015. "Technological strides in subtitling", in Sin-Wai Chan (ed.) *Routledge Encyclopaedia of Translation Technology*. London: Routledge, 632-643. [Chapter in peer-reviewed book, can be supplied on request]
- R5.** Díaz-Cintas, Jorge (ed.). 2008. *The Didactics of Audiovisual Translation*. Amsterdam: John Benjamins.
- R6.** Díaz-Cintas, Jorge. 2016. *Hermes Project – User Experience*. Confidential Report for Netflix.

Quality indicators: The significance of this research has been recognised through the commissioning and funding of the Hermes project by Netflix.

4. Details of the impact (indicative maximum 750 words)

The rapid rise of streaming video-on-demand services, such as Netflix, Amazon Prime Video, Disney+, Apple TV+ and HBO Max, has transformed the way that audiovisual media reaches diverse global audiences and radically increased the requirements for subtitling to overcome language barriers. The need for quality subtitling at an increasing scale led to Netflix approaching Díaz-Cintas in 2013 to lead the successful design, testing and implementation of Hermes, the first online subtitling test and indexing system by a major content creator. Netflix wanted to establish and deploy a way of testing subtitlers at a global scale, in parallel to their expansion across the world. The 33 languages that were part of the Hermes project, including English, covered all the languages into which Netflix had decided to localise their audiovisual productions (from Arabic to Vietnamese). At the time, Netflix was operating in only 16 of these languages. The remaining 17 languages – Bulgarian, Chinese (Simplified, PRC), Chinese (Traditional, HK, Taiwan, Singapore), Czech, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Polish, Romanian, Russian, Slovak, Thai, Turkish, and Vietnamese – were new to the

company and part of their commercial drive to expand translations into new languages and territories. Aware that the company was approaching a point where English was expected to cease being the primary viewing experience on Netflix, Hermes was conceived as a pivotal development that would “allow us to better vet the individuals doing this very important work so members can enjoy their favourite TV shows and movies in their language” [A, International Media Coverage, R3].

As an acknowledged expert in the field translation for subtitling, Díaz-Cintas coordinated the work of researchers and professionals from over 40 countries on the design, development and testing of the activities and the platform. Drawing on [R4], the test was built on the premise that validation should consider not only the candidates’ linguistic knowledge of the foreign and mother tongues but also the socio-cultural environment in which language is used and the technical constraints that characterise the practice of subtitling. Operationalised in a cloud-based platform, Hermes allowed for the interconnectedness of the linguistic, audiovisual and technical dimensions of subtitling, and adhered to the main quality parameters that regulate the delivery of subtitling, as theorised by Díaz-Cintas [R4]. Conducted between May 2016 and February 2017, the project was designed and trialled to be highly scalable and comprised thousands of randomized combinations of questions so that no two tests should be the same. The various testing rounds were designed on the premise that subtitling covers many areas of competence and skills that go beyond the mere conversion of one language into another [R2] and emphasised the need for test takers to be able to demonstrate not only their linguistic skills but also their technological dexterity and instrumental competence to reach the highest professional standards [R3, R4]. The test platform was developed on the basis of these research-informed principles, creating a testing environment that was as close as possible to that experienced by professional subtitlers. Díaz-Cintas guaranteed that the framework had been correctly applied to ensure that the test was appropriate and useful to the needs of examiners and testers. The testing platform also issued a unique identifier to each test-taker; this “Hermes number” stays with a translator for their career supplying translation services to Netflix, whether directly or via a language service provider. The Hermes test provides a good indication of a candidate’s skill level, enabling Netflix to match high-quality translators with individual projects. Two weeks after its launch in mid-March 2017, “Netflix HERMES translation test [had been] completed by thousands globally” [A, International Media Coverage, R3], covering all represented languages. By March 2018, around 500,000 people had taken the test, at which point Netflix closed the Hermes test platform and indexing system because they had reached their capacity for each one of the languages covered in the test, “due to the rapid popularity and response from applicants from all over the world” [A, International Media Coverage, R7]. As underlined by Netflix, Hermes allowed them “to confidently provide the subtitling of audiovisual content across the 32 different languages covered by the test, upping their coverage from 16 to 32 languages in a single year”. As a result, they were “able to widen [their] global reach and attract new audiences [...] Since the Hermes test was launched in March 2017, the Netflix subscriber base has grown from 92 million to 195 million paid members (as of September 2020)” [D].

The high-profile launch of Hermes by Netflix, including a press conference, led to coverage in hundreds of newspapers and online publications throughout the world in 26 languages, which served to highlight the importance of high-quality professional subtitling for consumers of screen media content [A]. However, some of the published information misrepresented the true ethos of the Hermes initiative and seemed to trivialise the task of subtitling, with headlines such as “Netflix wants to pay you to translate subtitles” or “Do you want to work for Netflix as a translator? You only need to take this test” [A, International Media Coverage, R1]. To address this, Díaz-Cintas organised and chaired a keynote opening roundtable at the international conference *Languages & the Media: Agile Mediascapes – Personalising the Future*, (Berlin, November 2016), with an attendance of over 300 delegates, in which several representatives of Netflix took part to dispel some of the misconceptions. The biannual event proved an ideal platform to discuss Hermes as it is the leading conference in the AVT industry and attracts broadcasters, VoD service providers, language service providers (LSPs), software and hardware developers, academics, researchers, translators and interpreters, and media experts involved in the production, marketing and distribution of audiovisual content for information,

entertainment and educational purposes. In June 2017, a meeting was also organised in Paris with AVTE (AudioVisual Translators Europe), where freelancers from various national associations of subtitlers met Díaz-Cintas and representatives from Netflix to discuss the role of Hermes in the industry. As it is not easy for freelancers to meet up with other colleagues or employers in person, these events were very well received as they offered a platform to discuss in more detail the logistics behind Hermes and its potential to enhance the quality of subtitling and to improve the working conditions of subtitlers. As two members of the Executive Board of SUBTLE (The British Subtitlers' Association) explain, Díaz-Cintas has “nurtur[ed] active exchanges and collaborations between the professional and academic world” [G]. Part of the legacy of Hermes has been the “discussions taking place among various industry stakeholders about ways of maintaining and improving high professional standards in the AVT industry”; “some valuable lessons can be learnt from the Hermes test and its wider impact” [G].

Improving conditions for subtitling freelancers and enabling translation companies and content providers to employ the best freelancers:

The project has improved conditions for subtitling freelancers by helping to forge a more direct relationship between Netflix and subtitlers, who traditionally worked for intermediaries and now can offer their services through the Netflix Preferred Fulfilment Partners (NFPF). This has involved an increase in the subtitlers' financial remuneration as Netflix requires their NFPFs to pay a specific rate to subtitlers which is higher than other translation intermediaries. Depending on the country, subtitles attract a pay range of between USD1 and USD4 a minute, while Netflix advertised paying rates of up to USD12 a minute [B]. Netflix says: “As a result of the Hermes test, along with other initiatives to improve working conditions and remuneration, around 3,000 subtitlers were hired by vendors that create subtitles for Netflix” and “this has improved the rates that subtitlers can earn” [D].

In an industry lacking a universally recognised accreditation, the Hermes number is becoming the de facto standard in the subtitling industry and has been called ‘an important first step towards the certification of professional subtitlers’ [MA Programme Leader, Hamad Bin Khalifa University, F]. Many subtitlers are using their Hermes number, or accreditation by Netflix, to “demonstrate” their professionalism and high standards in translation forums like LinkedIn, Proz.com and TranslatorCafe.com [B]. The traditional labour dynamics in the industry have been deeply disrupted and, to drive subtitling quality up, NFPFs are now closely working with subtitlers whose Hermes score is above a given level, since “Netflix will only have subtitles with valid H-numbers associated to it” [A, International Media Coverage, R8]. The H-number has become an “empowering tool” for professionals, who use it to “enhance their profile” [D].

High H numbers have come to represent a particular standard of subtitler and this has enabled translation companies and content providers to find and employ the best subtitling freelancers. Plint, as the fastest growing translation company in the world and one of Netflix's strategic partners for language localisation of films and TV series, explains that “The lack of recognised professional certification in our field has meant that many companies have always struggled to ascertain the specialised skills and knowledge required of prospective freelancers, without internally assessing the quality of their work which is costly and time consuming” [E]. Plint acknowledged that the metric values obtained from the Hermes test “give us a very good idea of the candidate's subtitling skill level and we can use this information to match audiovisual translation projects with high quality language resources” [E]. This enables them to meet the demands of their client: “when the client requests that their most prominent productions, such as the TV series *The Crown*, are subtitled by the best of our subtitlers, the H-Number is a useful metrics that gives us the possibility of doing so” [E]. The *Crown* was viewed by 73,000,000 households worldwide between 2016 and 2020. Proz.com, the “world's largest community of translators, interpreters, subtitlers and other independent language professionals”, request freelance subtitlers using their services to indicate their Hermes number as part of their expertise profile [B], as do other specialist directories for professionals working in the audiovisual localisation industry, like The Pool [B]. As Plint put it, “The Hermes project has had a significantly positive impact on our company, in particular, and on the subtitling industry as a whole” [E].

Professionalising translation through influence on curriculum design and Chinese professional organisations:

Although subtitling has been practiced professionally for many years, few universities offer any specialised courses in subtitling. Due to the acknowledged lack of professional certification in the field, which was made public by Netflix's development of Hermes, universities in Algeria, China, Colombia, Estonia, India, Lithuania, Peru, Qatar and Russia, among others, have now taken up the challenge to design and develop new training courses in subtitling to meet the quality criteria set by Netflix. In this respect, the research carried out by Díaz-Cintas has helped raise the academic visibility of subtitling in countries and contexts where previously subtitling did not exist as an educational topic, and "his valuable contributions to knowledge and its dissemination have framed every existing study or educational program in the field" [F]. He has given 34 invited lectures on the topic and 86 talks at universities, reaching over 5,500 people, trained the trainers so that they can act as multipliers, and validated undergraduate and postgraduate courses. At Hamad Bin Khalifa University (Qatar), Díaz-Cintas has evaluated the MA in Audiovisual Translation program as an external expert and provided guidance for improvement and mentorship to the faculty and students. His input since 2015 has "support[ed] the implementation of educational and professional practices in countries in which AVT is still under-developed, such as Qatar" and as a result over 60 students "will not only be better professionals but the trainers of coming generations" [F]. The establishment of these courses is proving pivotal in extending audiences, professional opportunities and skillsets for translators from new regions.

Díaz-Cintas has been interviewed on numerous occasions to discuss the topics of subtitling quality, training and testing [C] and in 2017, he was invited to become a board member of the Audiovisual Translation and Dissemination Council, China (AVTD China). AVTD's strategic goals are to enhance research and good professional practice in AVT and improve media accessibility in China. The Secretary in General and Vice-President of the Audiovisual and Dissemination Council (AVTD) China and Chief Coordinator of the audiovisual committee of the Chinese Culture Translation and Studies Support (CCTSS) network [H] explains that Díaz-Cintas contributed to the committee by "providing information, facilitating international research collaboration, and promoting the application of high-quality standards". In the light of this work, in 2018 he was invited to become a member of the Chinese Culture Translation and Studies Support (CCTSS) Network, Ministry of Culture and Tourism of the People's Republic of China as one of their consultants on audiovisual translation. In this role, he provided expert advice to industry professionals "such as Tencent Video, StarTimes, iQIYI and Youku" at the Sino-Foreign Audiovisual Translation & Dubbing Workshop at the 2018 Shanghai Film Festival "in areas such as quality standards, the technical and linguistic parameters of subtitling, the international market of AVT, hybrid workflows and new technical developments" [H]. In line with CCTSS's aims "to promote the value of AVT as one of the key tools in the commercialisation and globalisation of Chinese audiovisual products", Díaz-Cintas has "helped to raise the visibility and academic standing of AVT in China" [H].

5. Sources to corroborate the impact (indicative maximum of 10 references)

- A. International media coverage of Hermes (26 languages)
- B. Evidence of use of H-number by translators
- C. Interviews in the media with Prof. Jorge Díaz-Cintas
- D. Testimonial Globalization Strategy and Innovation Manager, Netflix.
- E. Testimonial Head of Business Development, Plint.
- F. Testimonial, Head of the Accreditation Committee and Program Leader for the Master in Arts in Audiovisual Translation (MAAT), Hamad Bin Khalifa University
- G. Testimonial, SUBTLE Executive Board
- H. Testimonial from Secretary in General and Vice-President of the Audiovisual and Dissemination Council (AVTD) China and Chief Coordinator of the audiovisual committee of the Chinese Culture Translation and Studies Support (CCTSS) network.