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# Tell us what you think: home and destination attachment for migrants on Twitter

Jisu Kim<sup>1</sup>, Alina Sîrbu<sup>2</sup>, Giulio Rossetti<sup>3</sup>, Fosca Giannotti<sup>3</sup>, Hillel Rapoport<sup>4</sup>

<sup>1</sup> Scuola Normale Superiore, Pisa, Italy, jisu.kim@sns.it

<sup>2</sup> Department of Computer Science, University of Pisa, Pisa, Italy alina.sirbu(«»)unipi.it

<sup>3</sup> Istituto di Scienza e Tecnologie dell'Informazione, National Research Council of Italy, Pisa, Italy, fosca.giannotti,

giulio.rossetti(«»)isti.cnr.it

<sup>4</sup> Paris School of Economics, Université Paris 1 Panthéon-Sorbonne, CEPII, France hillel.rapoport(«»)psemail.eu

#### ABSTRACT

Integration of migrants touches upon multidimensional aspects of a host country. Successful integration of a migrant could bring new opportunities, and hence an overall improvement of their living conditions and well-being. Integration can be described using two dimensions: the preservation of links to the home country and culture, i.e., *home attachment*, and creation of new links and adoption of cultural traits from the new residence country, i.e., *destination attachment*. In this talk we introduce a means to quantify these two aspects based on Twitter data. Our new indicators reflect well the behaviour of migrants across different countries. The home and destination attachment indices are compared with various elements such as language proximity, distance between countries and also with Hofstede's cultural dimension scores. The results highlight the link between host-country language proficiency and destination attachment. Moreover, we observed that destination attachment levels correlate to cultural aspects of the destination country, while home attachment levels seem to be more related to the country of origin.

#### **KEYWORDS**

 $International\ migration \cdot Integration \cdot Assimilation \cdot Segregation \cdot Shannon\ entropy \cdot Big\ data \cdot Twitter$ 

### **1. INTRODUCTION**

Integration of migrants touches upon multidimensional aspects of the host country. Successful integration of a migrant could bring new opportunities, and hence an overall improvement of their living conditions and well-being. Failure to integrate migrants in the host country's society may result in social conflict, creation of ghetto or/and possible economic losses. The studies of cultural integration have been mainly done by sociologists, by employing survey data such as World Values Survey, Eurobarometer, and European Social Survey. The main elements used in the studies are often inter-marriage, religion and language on cultural aspects [1, 5, 6, 7].

## 1. METHODOLOGY AND RESULTS

Over the years several integration theories have been introduced. While complete agreement of what integration means and how it should be measured does not exist, there have been efforts to identify different types of integration patterns. The patterns can be described using two dimensions: the preservation of links to the home country and culture, i.e. home attachment, and creation of new links and adoption of cultural traits from the new residence country, i.e. destination attachment. In this paper we introduce a methodology to quantify these two aspects based on Twitter data. We first identify international migrants using a technique developed by [4]. Subsequently, we compute home and destination attachment based on topics discussed on Twitter. Our new indicators reflect well the behaviour of migrants across different countries. For instance, figure 1 displays the home and destination attachment indices at a country level for Italian emigrants across different countries of residence. In general, we observe that Italians are more attached (on average 0.21) to home than attached to their destination country (on average 0.073). However, Italians tend to integrate well in English speaking countries as the destination attachment levels are at highest in the United States, Australia, and the United Kingdom. Although the destination attachment level is not as high as in English speaking countries, they also tend to do relatively well in neighbouring countries like Spain, France, Belgium and the United Kingdom. Spain for instance has also a high destination attachment level due to the language similarity between two countries. In contrast, Italian emigrants residing in countries such as China, Hungary, and Thailand that are culturally far from Italy have the lowest destination attachment index levels.

To understand the link to language proficiency, we computed box plots for two groups in the figure 2; a group that often speaks the language of the host country and a group that very rarely speaks the language of the host country. Here, we are looking at all the migrants we have in the dataset regardless of the country of origin or the country of residence. We observe that the group that speaks the language has a higher destination attachment level. For this group, the destination attachment level on average is 0.1 and 0.09 for the home attachment level. On the other hand, the group that does not speak the language show higher home attachment level. For this group, the home attachment level on average is 0.14 and 0.04 for the destination attachment level. Our indexes confirm the link between language and destination attachment of immigrants in the host country. In addition, it shows the relationship between the language and attachment to home country which is not evident in the literature.

We also compared the home and destination attachment indices with Hofstede's cultural dimension scores [2, 3]. We observed that destination attachment levels correlate to cultural aspects of the destination country, while home attachment levels seem to be more related to the country of origin.



AU=11, BE=14, CH=16, CN=10, DE=21, ES=46, FR=36, GB=59, HR=9, NL=15, PT=8, TH=11, US=66

#### 2. FIGURES AND TABLES

Figure 1. Box plots for home and destination attachment indices grouped by destination countries for Italian nationals living



abroad. The x-axis displays countries of residence of Italians. The numeric labels correspond to the number of Italian nationals in each group.

Figure 2. Box plots of home and destination attachment indices for the subgroup of migrants who speak the language of the host country on the left and the subgroup of migrants who do not speak the language of the host country on the right.

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