Applying Texts Mining on Child Custody Cases Regarding New Immigrants in Taiwan: An Empirical Study on Equality

Hsuan-Lei Shao[*] & Sieh-Chuen Huang[**]

Abstract

There are more and more transnational (international) marriage cases in Taiwan today. As an ethnic group, the New Immigrants are facing multiple issues regarding equality/ inequality in daily life. This article attempts to find if a foreign spouse is treated equally in child custody proceedings in Taiwan. In detail, we studied 116 real legal texts (judgements) by Natural Language Processing (NLP) and Machine Learning (ML) in which 31 foreign cases are included. Firstly, after word segmentation, the document-term-matrix of TF-IDF is produced and then put into principle component analysis so that a two-dimensional plot is formed. It is thus found that 85 domestic marriage cases and 31 international marriage cases are almost located at the same place, meaning that the court does not use different vocabularies between these two types of cases. It indicates that the family judges did not treat or judge the New Immigrants differently from domestic couples. Secondly, using gradient boosting of machine learning, it is found that the vocabulary characteristics of cases involving New Immigrants are: "whether one party appears at court", "renting a house", and "living together", indicating that judges are more concerned about the participation of procedures and residence of New Immigrant parents. If a foreign spouse obtains legal aid and participates in the judicial process, since the standard adopted by the judge on the child custody is the same on both New Immigrant cases and domestic marriage cases, it is very possible that the foreign spouse will receive custody. However, the foreign spouse may

[*] Associate Professor, Department of East Asian Studies, National Taiwan Normal University. E-mail: hlshao@ntnu.edu.tw

[**] Professor, College of Law, National Taiwan University. E-mail: schhuang@ntu.edu.tw

need to acquire other social support on housing as it is a factor that family judges tend to investigate in New Immigrant cases. In this paper, the authors adopt disciplinarities of information science and law, showing one of the possibilities in which technology helps us to deepen the discussion of social responsibility.

Keywords: Legal Analysis, Natural Language Processing (NLP), TF-IDF, Equality, New Immigrants, Empirical Legal Studies, Principle Component Analysis