Cover Page

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Title: Reading Arabic : legibility studies for the Arabic script
Date: 2012-10-25

Summary

This dissertation sets out to determine the effect of the complexity of word formation on the legibility of Arabic texts set in the Naskh style. It is also designed to assess the role the short vowels play in the reading of Arabic texts. This is carried out via a holistic approach to legibility research that combines the visual culture with reading and legibility studies.

To do this it starts by giving a short account of the development of Arabic letterforms used in the setting of long texts and their transition from manuscript to typographic norms. It is a story of an increasing level of maturity and complexity in manuscript forms that initially proved too difficult to morph from handwritten forms to metal-set ones. This introduces the theme of complexity and the role that technology has played in morphing manuscript styles into typographic ones. The first four centuries of printing Arabic comprised an increasing level of complexity in terms of design; that would soon come to halt with the 20th century and the quest for speed, rather than beauty of form. It also establishes how the current state of affairs is one that allows Arabic typography to grow in either or both directions. As such, it sets the stage for the key question regarding the role of complexity of word shaping in the reading of Arabic texts.

The dissertation analyzes the anatomy of the Arabic script, in both manuscript and typographic forms and offers a glimpse of the typographic visual culture of the Arab world today. It also presents the design process of the specially designed Afandem typeface family that is representative of the three different typographic interpretations of Naskh. This family is meant to provide the stylistic variable that tests the effect of the complexity of the word formation on legibility, as set out in the research question.

To that, this dissertation also investigates the characteristics of eye movement in reading and the results of legibility studies. It presents a new definition of legibility that is rooted in the models of eye movement research, and argues that legibility is relative and depends on the characteristics of the visual stimulus, the reader, the distance between them, and the reading task itself. It has also demonstrates that legibility effects are manifest very early on in word processing. As to the reading of Arabic, it has argued that there are specifics to it that are different from the reading of Latin. To that effect, one needs to address the process of reading from an international perspective, one that takes in the special characteristics of different languages and scripts.

The foremost significant finding to emerge from this study is the affirmation that the increased complexity of word formation has a negative effect on the legibility of Arabic typefaces. This is in line with the view of leading psycholinguists that the complexity of the visual has an extra cost in word processing. The study has also confirmed the argument that the short vowels are second class citizens within the Arabic alphabet and that their inclusion in text adds a cost to word processing even though they bring with them extra clarity that results in a reduced number of

regressions. These results are discussed within the scope of the Arab world today, its cultural and educational setup, and avenues for further research are explored.