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Antecedents and Consequences of User’s Preference for Mobile Display Orientation: Media Domain, Task Performance, and User Experience
移動設備用戶顯示偏好的前置因素與其結果：媒介領域、任務績效、與用戶體驗

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Abstract

Vision is the main source of human being’s information gathering. The development and the adoption of mobile devices provide people the opportunity to carry a screen around to view all kinds of media content. Mobile applications can be categorized into 3 media domains: the interpersonal domain, the broadcast domain, and the document domain, as were proposed by Roger Fidler (1997) when he was developing the concept “mediamorphosis”. Each media domain has inherited a set of unique media traits, including the presentation and the format of display interface. Mobile devices nowadays can show adaptive views, changing with the user’s holding position.

Few empirical studies have been conducted to shed light on how and why mobile device users choose the display orientation (i.e., portrait/vertical or landscape/horizontal). It is unclear what effects the change of orientation can cause, either. The question remains unanswered whether visual media traits are inherited in each domain during waves of media evolution. The hypotheses of congruency between each media domain and its display orientation preference keep untested.

To fill the gap, I have carried out three separate studies, including a content analysis, an experiment, and a secondary analysis of mobile phone logs, to test the related hypotheses and answer the research question. The results reveal that distinctive differences exist in user choice of display orientation between the broadcast domain and the interpersonal/document domain. Users under the interpersonal/document domain are more likely to choose portrait orientation than are users under the broadcast domain. Users who choose a display orientation congruent with the media domain are likely to have more accurate factual memorization and shorter task completion time. The studies together show that while other media traits are being changed as media evolve and converge, orientation preference is still one of the dominant media traits of the three media domains.
Keywords: mediamorphosis, screen orientation, media domain, portrait, landscape, performance, user experience