

The Cycle of Knowledge Through Visuals

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In the Visual Commons (VICOMM) project different aspects of visual communication have been explored in a multidisciplinary way. The project partners embrace various fields of research: journalism, media technology, work psychology and media production processes. Each partner contributes distinct research culture, methods, knowledge and networks of research and industry partners to the consortium. The research interests of participating researchers can be represented as a **cycle of visual knowledge production, communication and reception**.

We start the cycle with professional photojournalism in magazines. In her dissertation, Hanna Weselius explores the many aspects of the **production process of photojournalism** in consumer magazine context (Fig. 1). In order to understand the production processes and the meanings of resulting photographs one has to take into account the journalistic concept of each magazine and the genres involved. In the case studies it became clear e.g. how the genres of portraiture and political photojournalism are affecting the processes of constructing visual representations of people in intentional contexts.

The work of Jenni Mäenpää has thematised photojournalism from a more general angle - as a special kind of **knowledge production that follows ethical codes** of its own. Especially the changing codes of objectivity and the professional identity of photojournalists are under scrutiny. Digital photo editing is seen as a strategic ritual which follows certain conventions in order to allow photojournalism to maintain its status as an objective mediator of the visual messages (Fig. 2). Furthermore, these rituals are needed for controlling the paradoxical tension between truth and interpretation that is currently a re-heated issue in the digital age of photojournalism.

Satu Lehto researches **visual knowledge from the recipient's perspective** and explores the different cognitive abilities and preferences people have (Fig 3.). One of the key hypothesis in Satu's work is that the processes of acquiring, exploring and exploiting visual knowledge differ from those practices of textual knowledge work. We have individual differences in our recall of visuals and in our visual literacy in general. The results of this work can be applied in various fields, e.g. leadership, teaching and arts.

Stina Westman and Raisa Halonen have modelled **visual knowledge for enhanced management of visual content**. Three case studies have examined image and video concepts important in journalistic visual knowledge processes. A magazine image categorization model was created to account for function- and content-based categories (Fig. 4) used by domain experts. The concepts of image naturalness (Table 1) and interestingness were elaborated through a novel quality evaluation method. Measures for comparing approaches to visual video summarization (Fig. 5) were also developed in a user-led manner.

Esa Sirkkunen brings the visual artefacts - or photos - back into the sphere of production and consumption of visual culture. He writes about the **asymmetries of power** in the area of photo publishing on social media services and platforms. Although the social media rhetoric claim that users are the new kings (Fig. 6) in the networked media ecology, the users do in fact very seldom control the conditions of the production, e.g. the privacy settings, the copyrights or the way the **user knowledge is sold to advertisers**. Concluding, real visual commons are rare.

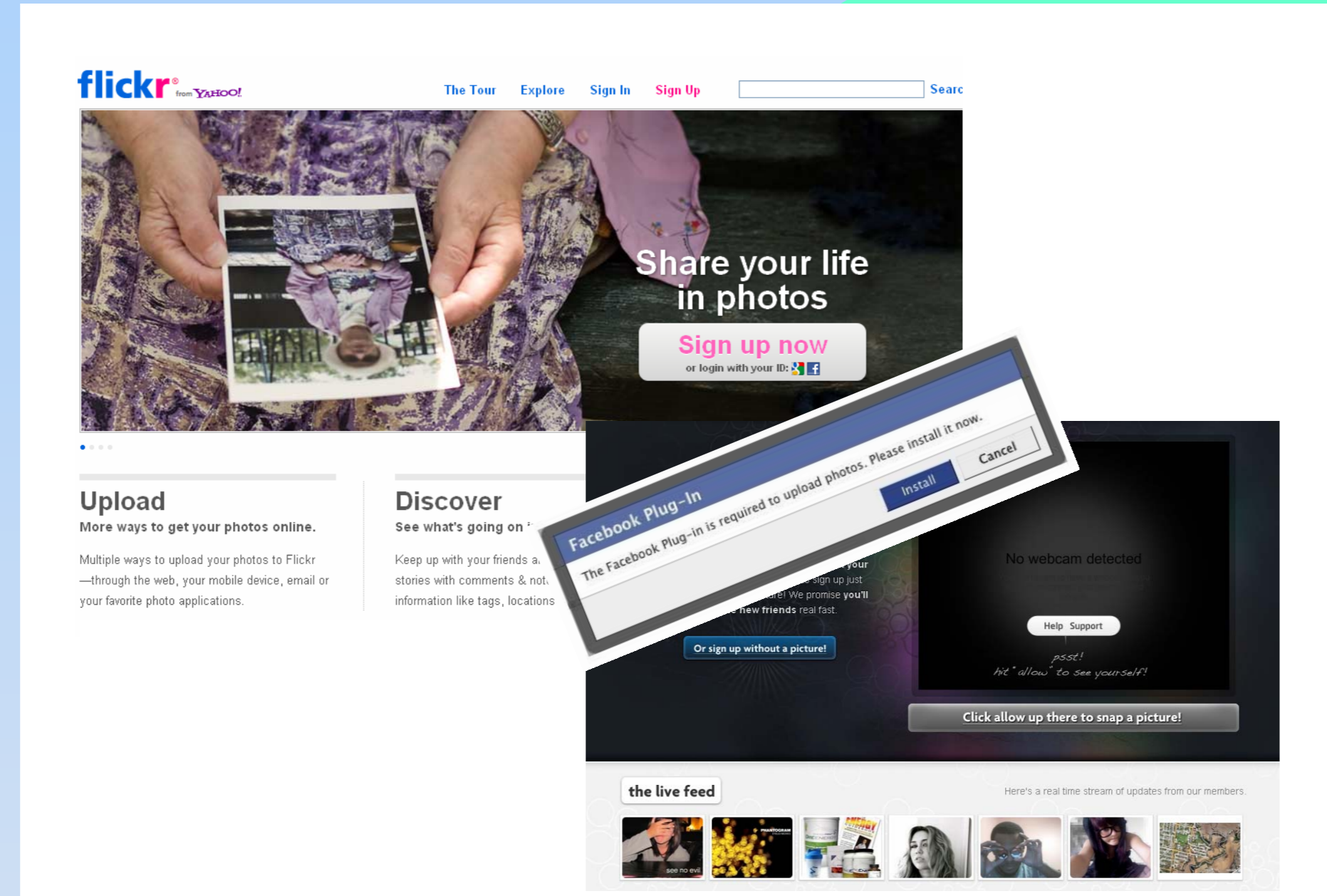


Figure 6: The political economy of photo publishing

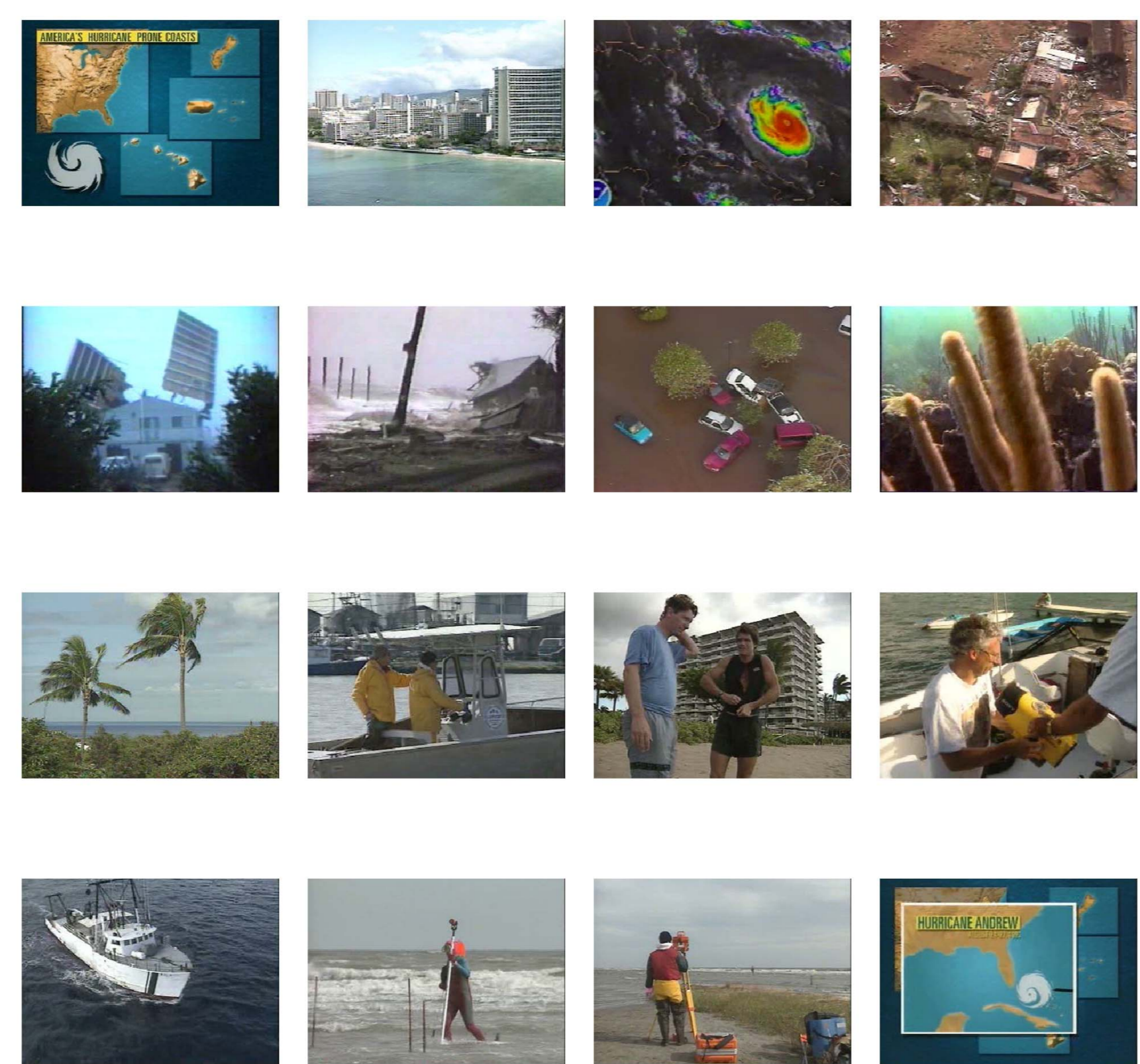


Figure 5: Example of a video's still image storyboard

Table 1: Factors of image naturalness

Attribute class	Attributes which decrease perceived naturalness	Attributes which increase perceived naturalness
Colors	studio lighting, poor color balance, non-preferred colors, unnatural colors, strong colors	natural lighting, good color balance, natural colors, preferred colors
Composition	unrealistic perspective, poor cropping	realistic perspective, good cropping
Genre	controlled	typical, effortless
Manipulation	staged, artificial, too neat, manipulated, synthetic	unmanipulated
Objects	nonliving, unnatural combination	living, natural objects, natural combination
People	posed, fake expression	relaxed people, genuine expression
Personal	unfamiliar objects	personal connection, affective, familiar objects
Quality	too high quality, too low quality	low quality, high quality
Reality	lack of entropy, temporary setup, unconvincing image	real, reality unaltered, entropy, credible
Setting	unrealistic situation, fake setting	natural setting, realistic situation, natural action, outdoors

Project Publications

- Halonen, R., Westman, S., Oittinen, P. (2011). Naturalness and interestingness of test images for visual quality evaluation. Proceedings of SPIE/IS&T Electronic Imaging, Image Quality and System Performance V. San Jose, CA, USA.
- Laine-Hernandez, M., Westman, S. (2010). Comparison of categorization criteria across image genres. (Ed. Grove, A.) Proceedings of the American Society for Information Science and Technology 47(1):1-12.
- Mäenpää, Jenni. The Guardians of objectivity. Changing work practices and professional identity of photojournalists in the digital age. Submitted to Journalism Practice.
- Mäenpää, Jenni & Seppänen, Janne (2010) Imaginary Darkroom. Digital photo editing as a strategic ritual. Journalism Practice 4 (4), 454 - 475.
- Mäenpää, Jenni & Seppänen, Janne (2009) Lehtikuvan digitaalinen murros. Teoksessa Esa Väliverronen (toim.). Journalismi murroksessa. Helsinki: Gaudeamus, 50-67.
- Sirkkunen, Esa (2011) The Political Economy of Photo Publishing (to be submitted in December 2011)
- Weselius, Hanna (n.d.) Shared Picture. Portrait photography production in consumer magazine context. To be published (Ph.D. monograph)
- Westman, S. (2011a). Evaluation of Visual Video Summaries – User-Supplied Constructs and Descriptions. International Journal of Digital Libraries. Springer. Doi 10.1007/s00799-011-0071-y
- Westman, S. (2011b). Journalistic Image Access: Description, Categorization and Searching. Department of Media Technology. Aalto University Publication Series DISSERTATIONS 87/2011.
- Westman, S., Laine-Hernandez, M., Oittinen, P. (2011). Development and Evaluation of a Multifaceted Magazine Image Categorization Model. Journal of the American Society for Information Science and Technology 62(2): 295-313.
- Westman, S. (2010). Evaluation Constructs for Visual Video Summaries. (Eds. Lalmas, M., Jose, J., Rauber, A., Sebastiani, F. & Frommholz, I.) Proceedings of the 14th European Conference on Research and Advanced Technology for Digital Libraries (ECDL). Springer-Verlag, Berlin, Heidelberg, 67-79.

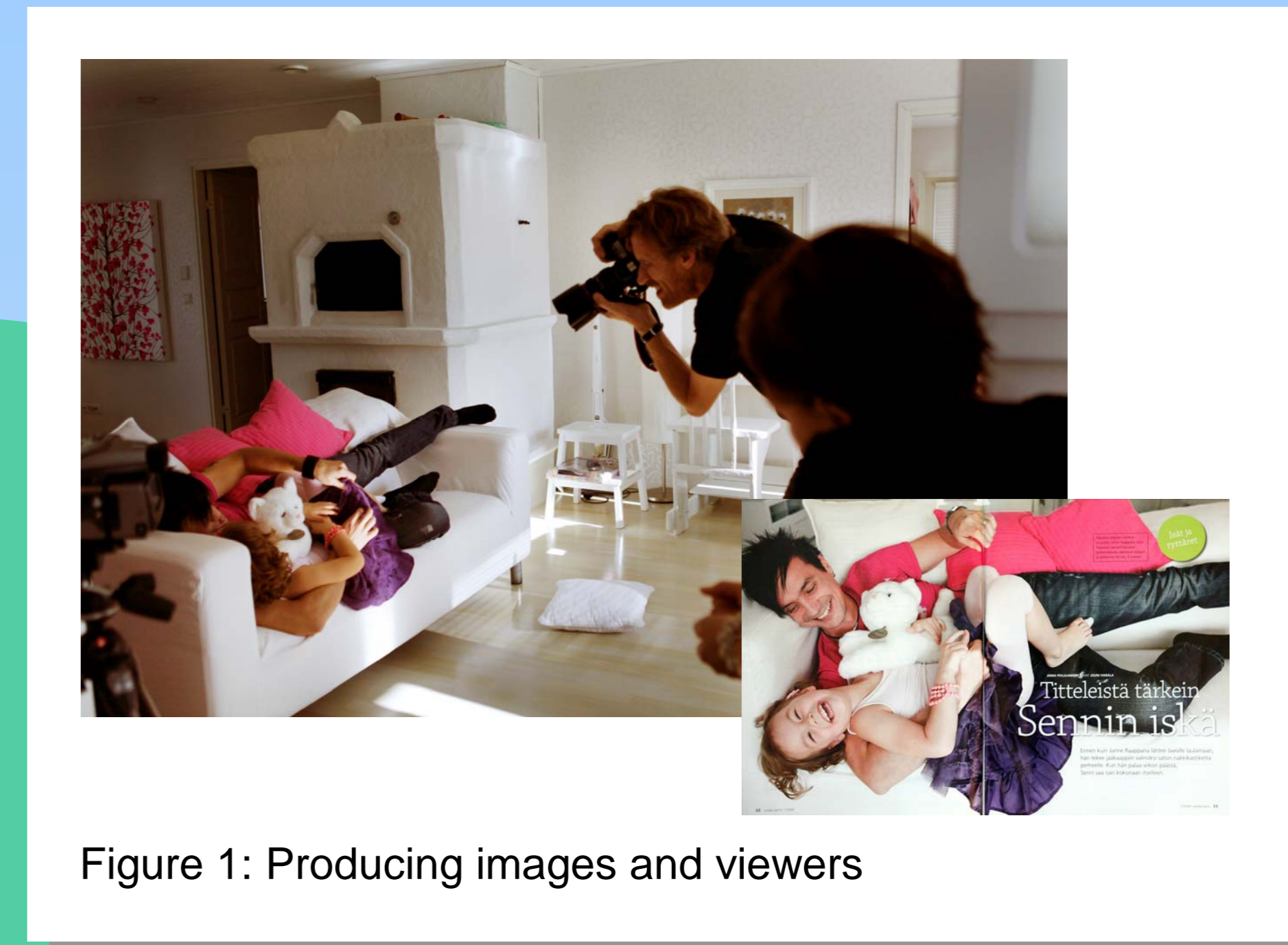


Figure 1: Producing images and viewers



Figure 2: Exploring the forms of participatory and professional visual journalism

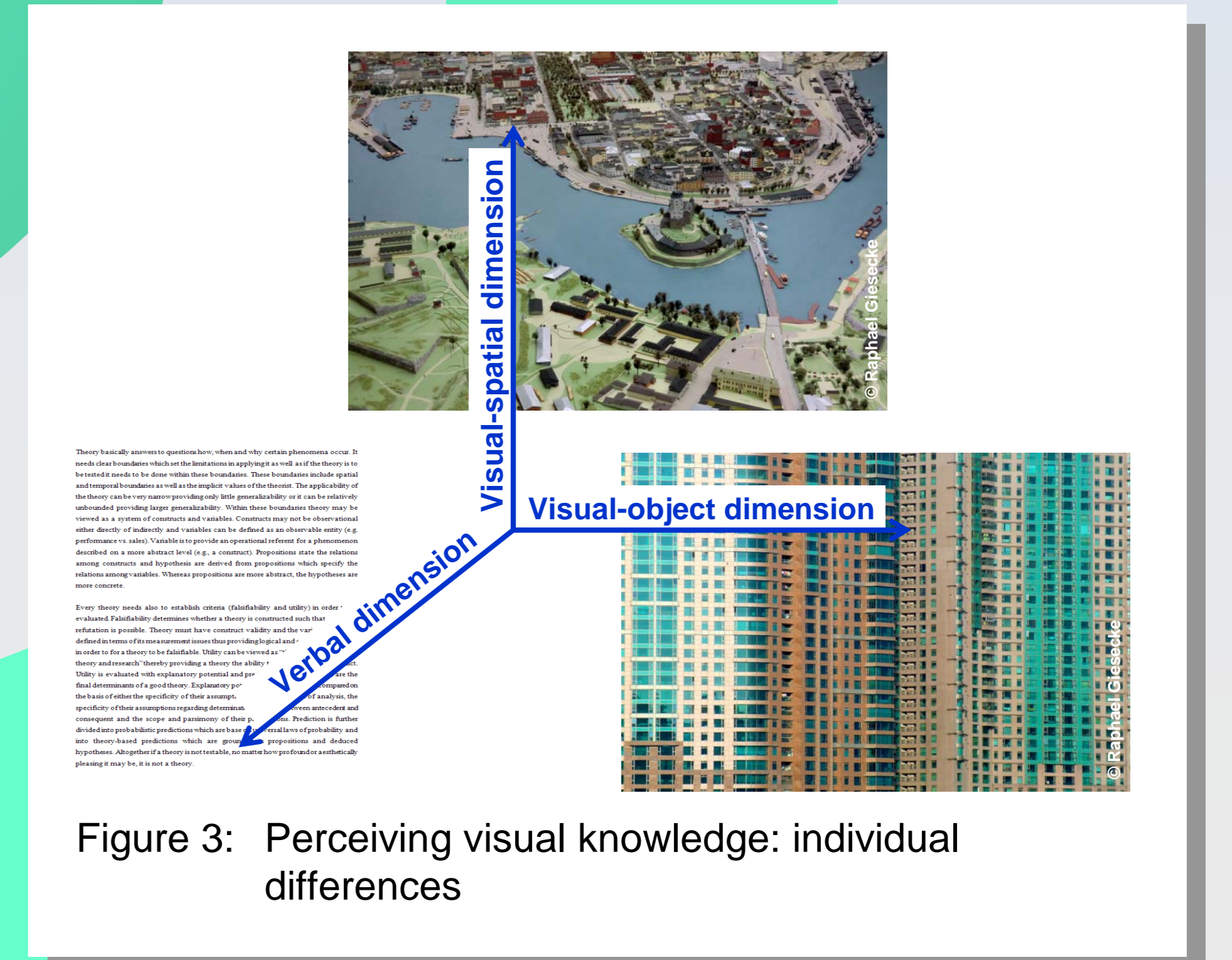


Figure 3: Perceiving visual knowledge: individual differences

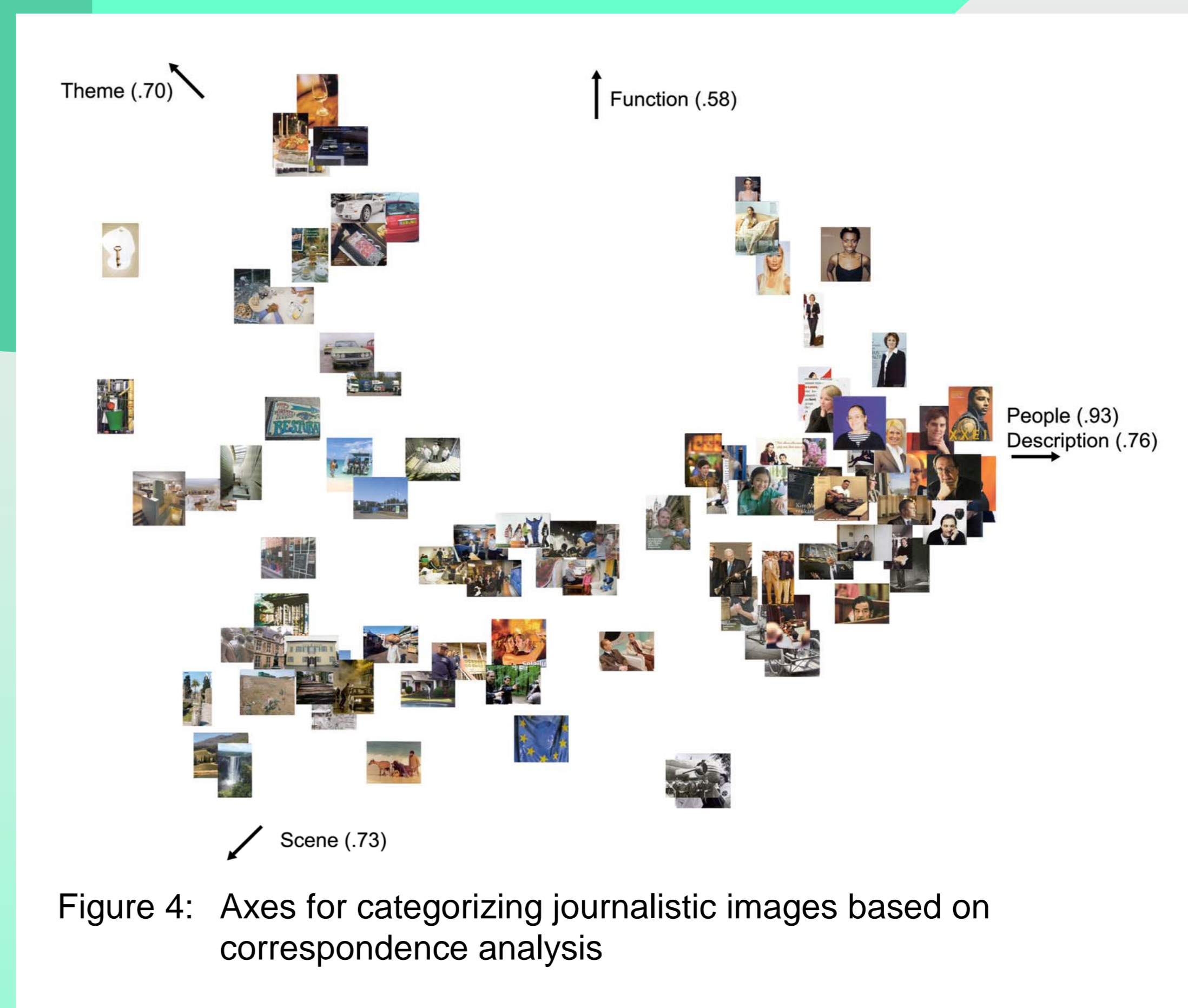


Figure 4: Axes for categorizing journalistic images based on correspondence analysis