

## At Work, In View: The Cognitive Science of Working in Spaces with Transparent Boundaries

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### I. ABSTRACT

Open floor plans and transparent walls are regularly used in corporate offices and at co-working sites to symbolically communicate organizational transparency, encourage interpersonal coordination and communication, transmit natural light throughout a space, and provide views throughout the workplace and outside the building.

Previous research has identified differing cognitive and emotional consequences of working in environments where people can see/hear or be seen by/heard by others. It can be distracting (Veitch, 2012), for example.

However, prospect over the nearby area increases awareness of colleagues' activities and shared, amenity-rich common spaces encourage interactions that have been linked to the development of positive inter-personal bonds and creative/innovative solutions (Allen and Henn, 2007). Biophilicly-designed spaces facilitate focused thinking and creativity; one of their attributes is a view out over the nearby area from a location that seems secure because the person in it is mainly shielded from view (Heerwagen and Gregory, 2008).

Social facilitation is tied to working in view of others (Myers, 1996), as are worker modifications of their behavior in visually open environments (Bernstein, 2014).

This study examined the self-reported performance-related repercussions of working in open spaces and in areas bordered by transparent glass walls, with insights derived leading to a more comprehensive and nuanced understanding of working in view, and often the acoustic range, of others. The co-working site at which data were collected is unique because almost all interior walls are clear glass; the proliferation of transparency allows not only co-workers to connect visually but also for people working at different firms to do so. In addition to spatial analysis conducted by an architecture team, data were gathered via interviews and observation. Observations were done on all three floors of the co-working center. Interviews probed issues raised by the observations.

People working in spaces bordered by transparent glass walls or no walls at all felt more energized than relaxed while working and participants were somewhat more likely to find it distracting to work in transparent-walled or no-wall spaces than in other spaces. Awareness of others and their activities was higher in more open spaces and this awareness did have positive professional ramifications. Visually open environments were perceived to enhance professional performance by people working at young firms competing in challenging markets, the most prevalent sort of organizations renting workspaces at the co-working site where data were collected.

### 2. REFERENCES

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### 3. AUTHOR BIOS

#### **Sally Augustin, PhD; Principal, Design With Science; Fellow, American Psychological Association**

Sally Augustin, PhD, is a practicing environmental psychologist with extensive experience integrating insights derived from environmental neuroscience, other social/physical sciences, and project specific research to develop places, objects, and services that support desired experiences.

#### **Melissa Marsh, Assoc. AIA; Chief Executive Officer, PLASTARC**

Leveraging a background in the social sciences with a Master of Architecture at MIT, Melissa built cross-disciplinary consulting practices within a number of leading architectural firms. Interested in further exploring the intersection of design and human factors research, Melissa started her own interdisciplinary consultancy firm, PLASTARC, where she leads a diverse team, from sociologists to data visualizers, dedicated to shifting the metrics associated with space from square feet and inches to occupant satisfaction and performance.

#### **Kristin Mueller, Design Analyst, PLASTARC**

Since the completion of a Master's program at Yale in 2009, Kristin has been involved in both the academic and professional realms of architectural practice. She has worked in both the US and Europe in a range of office sizes and cultures, from those with global reach and several hundred employees, to localcentric ones with less than ten.

#### **Sasha Ragland, Environmental Psychology Research Specialist, PLASTARC**

While pursuing psychology as an undergraduate student Sasha realized a desire to engage her interests in design and art. Sasha has a great deal of research experience.

#### **Cassie Hackel, Sociospatial Analyst, PLASTARC**

Cassie is a sociospatial analyst at PLASTARC and a Master's of Urban Planning candidate at the University of Michigan. Cassie's current work includes analysis and advisory on workplace strategy, change management, industry trends, and the intersection between design and human factors. Cassie holds a degree in Urban Studies from Vassar College.