PAC
Perceptual Awareness Centre

Perceptually Structured Communications

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Current
Limitations

Perception &
Communication

PSC

Research &
Development

Advantages

Perceptual
Technology

A communications platform for the 21st Century
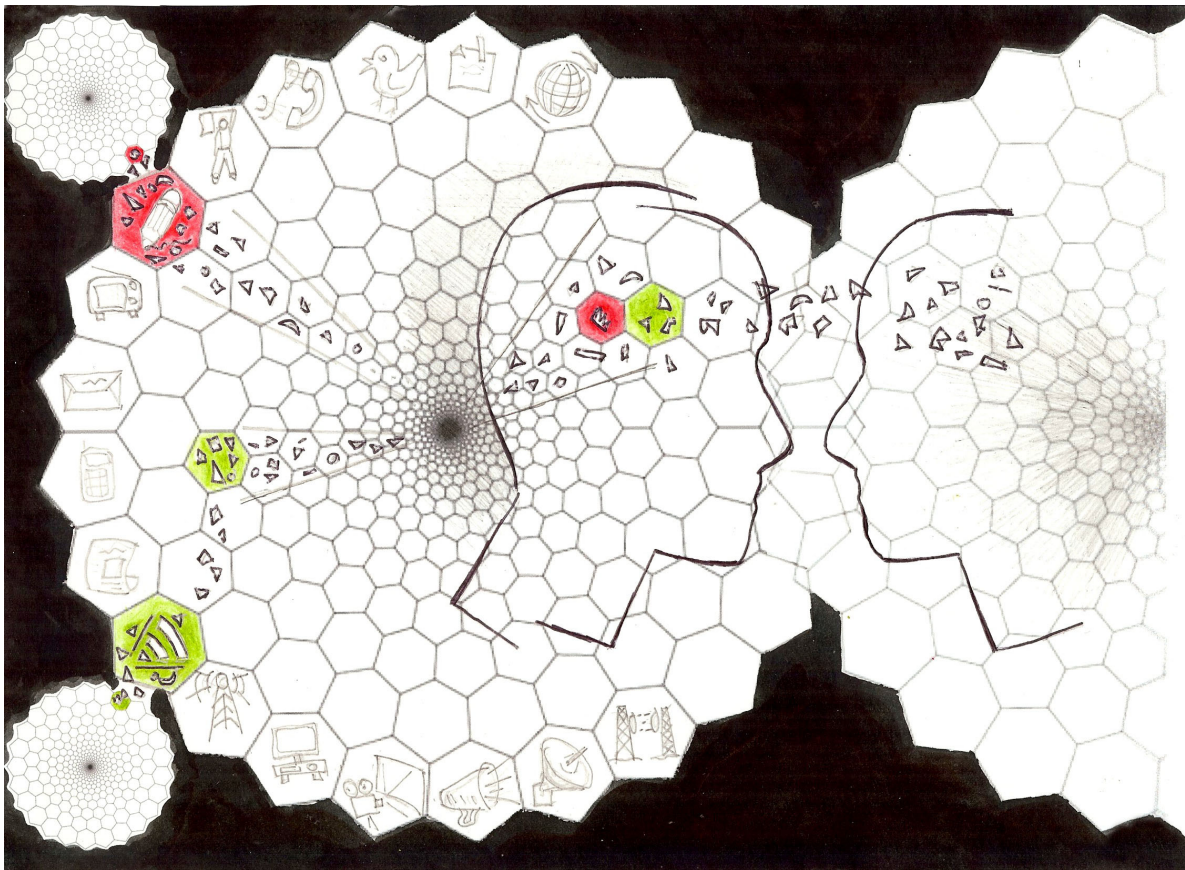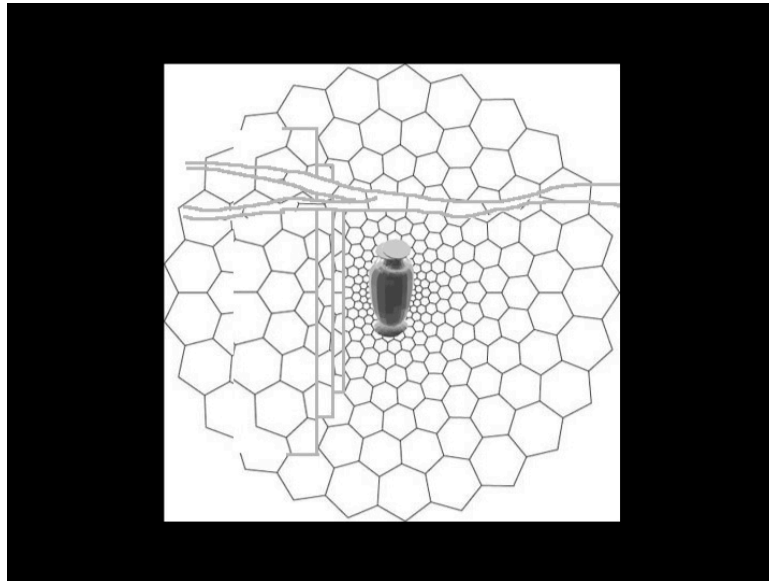Placing perceptual awareness at the heart of our communication
systems

Perceptually Structured Communications:
A communications platform for the 21st Century placing perceptual awareness at the heart of our communication systems

Vision-Space models visual awareness with its explicit – 'what' and implicit contextual – 'where' pathways, processes and characterisations. It reflects a functional understanding of perceptual structure that reaches beyond our current confines enabling us to think strategically about how we can improve:

- Information Communication Technologies
- The way organisations are structured and operate with respect to social media the internet and internal and external communications

The PSC system builds on the nature of implicit contextual awareness and its role in supporting explicit task orientated awareness. PSC identifies how noisy context can be filtered and fashioned to enhance both internal communications and orientated to support corporate messaging. Properly handled, *context* provides orientation! With adaptation, these insights into the nature of perceptual awareness could equally be deployed within more confined chain-of-command scenarios.

Perception and Communication:

Effective communications lie at the heart of an organisation's operations, how it presents itself and how it is perceived making the processes involved business critical. In forming our relationships we develop perceptions that become our realities. The human perceptual system performs in ways that remain well in advance of our current technologies. We now understand how to apply the insights to an organization's communication systems to enhance the efficiency and saliency of communications.

Pictures and Images

Abridged quote

Picture being: "a real representation, an ordered record, such as a video-signal, a photograph, an activity pattern in a neural structure. The order of the picture is purely conventional and exists only with respect to an external agent.

Images: "always contain **more than** pictures because the whole structure of the receiver (a lifetime's experience) is summed up in them."
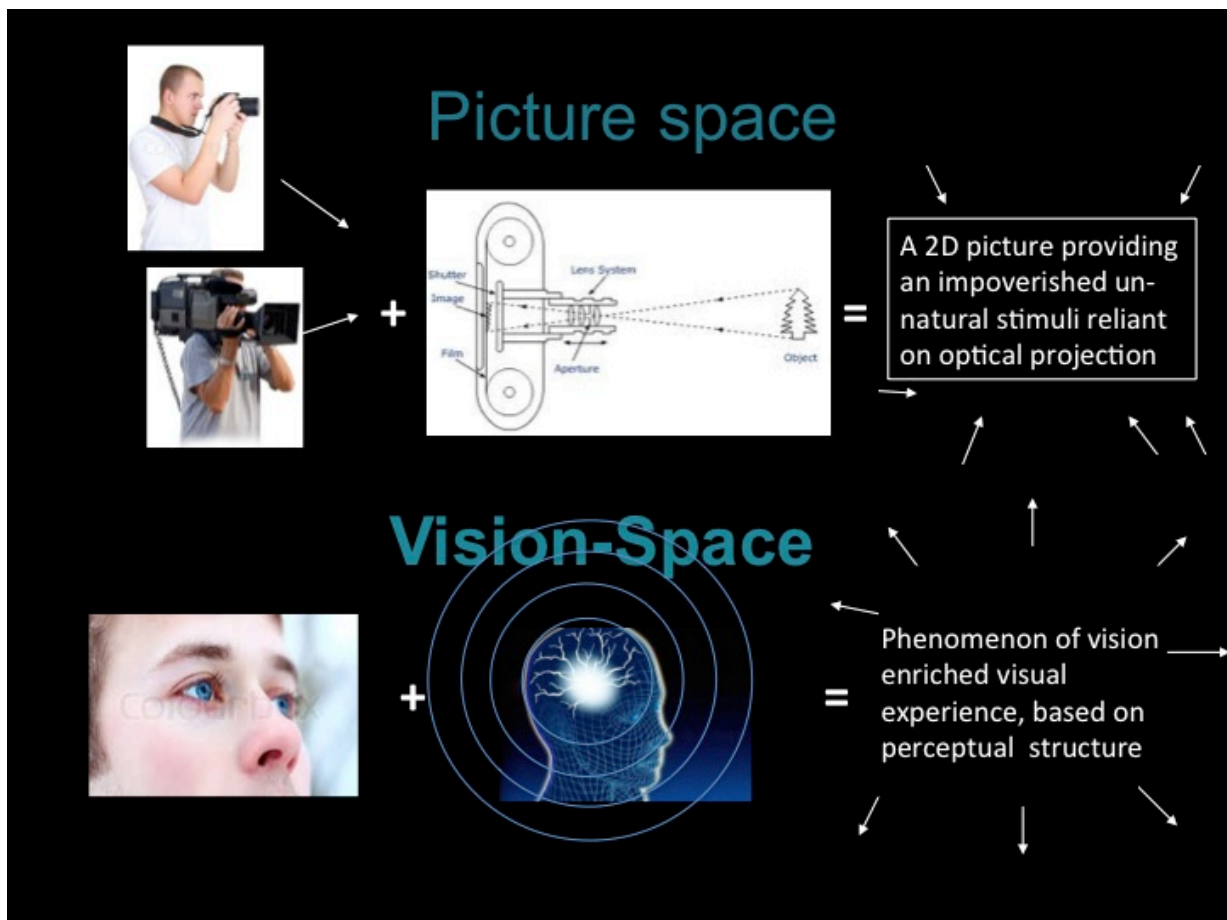
Jan Koenderink

Each one of us supports the ability to generate a perceptual structure through which we make sense of the world on a direct, experiential basis. We find it easy to use our multisensory perceptual structure to understand where we are, what we are doing and what is happening around us. So by using this knowledge, we can start to fashion communications for an organisation that reflect these capabilities – make sense of a lot of data, know which bits are the most salient and be able to marshal resources in a way that the rest of the business is aware and can interact with if they need to.

Salient communications should naturally unfold from day to day activities. By applying what is understood about perceptual structure it is possible to organise and optimise that inherent potential contributing to an organisation's capacity and instinct to perform and deliver. The emerging communications discipline of PSC will affect effective interactions within and between an organisation and its publics. Processes through which mutual understandings can develop and be sustained, positively influencing opinion, behaviour and outlook providing the optimum culture for the generation of advantage.

Current limitations:

Existing Information Communication Technologies (ICTs) and general approach to communications contribute to process akin to the *projection* of a 'virtual reality' that is often remote, decontextualized and inefficient inhibiting the communication of meaning (content, context and intent). In terms of communications this can lead to channel silos, can feel remote, out of context and can lead to misunderstanding of meaning and intent.

Communication pathways need to be fashioned to:
- Formulate explicit focus through formal management structures: 'explicit-what'
- Draw from the informed real-time implicit context generated by an organisation as it operates and interacts with the world: 'implicit-where'

By working with our perceptual system collective situational awareness can be generated resulting in meaningful '*presentation*'.

Right and left Hemisphere characterisations

Left hemisphere: dependent on denotative language and abstraction, yields clarity and power to manipulate things that are known, fixed, static, isolated, decontextualised, explicit, disembodied, general in nature, but ultimately lifeless.
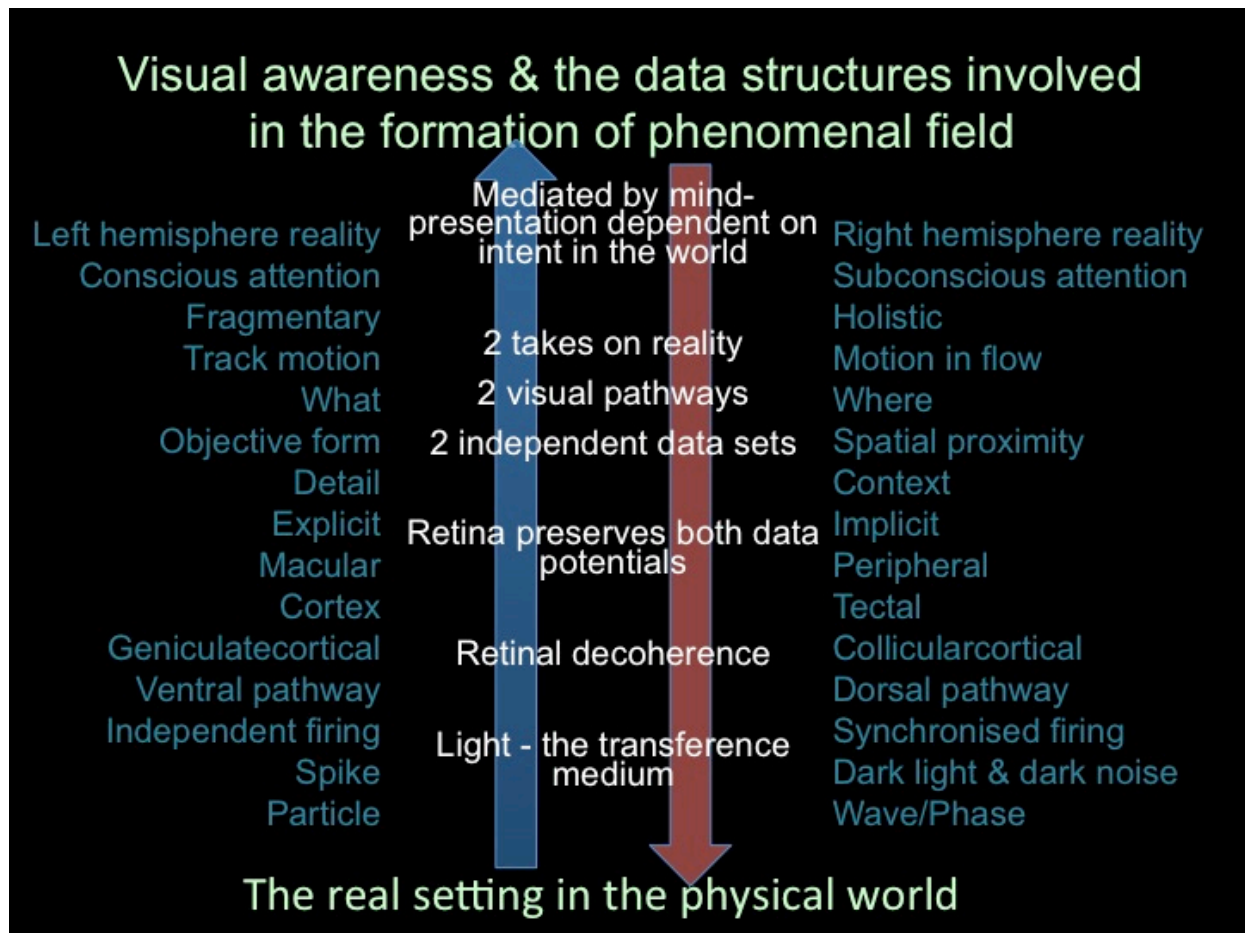
The right hemisphere: yields a world of individual, changing, evolving, interconnected, implicit, incarnate, living beings within the context of the lived world, but in the nature of things never fully graspable, always imperfectly known.

McGilchrist (Master and his Emissary)

Advantages:
The application of PSC presents the opportunity to increase:
- The cohesiveness of an organisation
- Situational awareness leading to anticipation and preemptive action
- Appropriate and measured responsiveness to a situation
- Speed of messaging and its comprehension
- Effective targeting of communications (audience segmentation)
- The overall effectiveness and salience of communications

Visual awareness & the data structures involved in the formation of phenomenal field
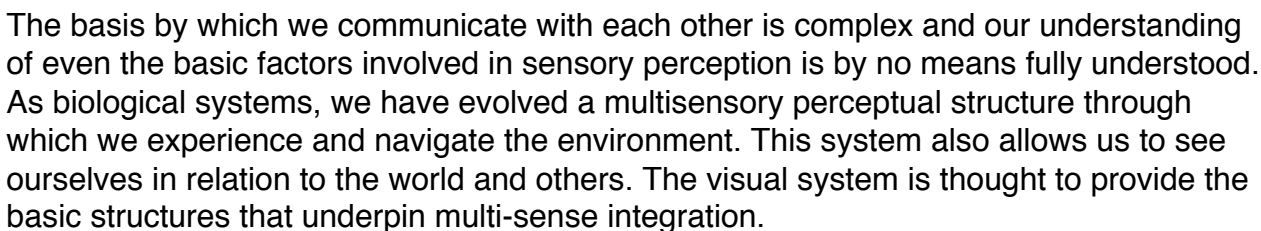
On a day-to-day basis and throughout our lives our multisensory perceptual structure delivers highly efficient situation awareness facilitating meaningful communications. PSC applies these insights to the structure and operations of an organisation through its internal and external communications processes. By modeling aspects of the operational dynamics of an organisation to mirror the ways we perceive and communicate at the experiential level, we can help to configure specialist communications pathways that through mediation support one another to generate situation awareness.

Perceptual Technologies: (link to PT)
We are looking for a commercial organisation currently working in this area to work with us to develop a platform technology for 21st century communications.

Vision-Space is a new form of illusionary space based on perceptual structure that models visual awareness. Independent TRIZ analysis establishes the technology as representing a paradigm shift for all forms of information display, highly disruptive, with over 200 applications across 12 industries. The ongoing research agenda is being pursued in association with Cardiff University and the vision science forums.

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The basis by which we communicate with each other is complex and our understanding of even the basic factors involved in sensory perception is by no means fully understood. As biological systems, we have evolved a multisensory perceptual structure through which we experience and navigate the environment. This system also allows us to see ourselves in relation to the world and others. The visual system is thought to provide the basic structures that underpin multi-sense integration.

Research and Development (link to ERA)
At the experiential level we can directly express an awareness of our sensory processes through creative activities including visual art, music and dance. In support of perceptual awareness we have also derived sophisticated ways in which to communicate such a language and symbols that combine sensory inputs, in the case of spoken and written language, vision and audition. These systems 'emerged' or 'self organised' more than they were the result of a conscious conceptual approach to a problem that needed solving. As such these intuitive manifestations are enmeshed with our perceptual structures and can be considered to form a natural extension to it.

Phenomenal field

We can't say the same about our technologies and the artificiality of the virtual worlds we have constructed with them. ICT's have derived from a purely conceptual approach to the nature of reality and their outputs are limited by the preconditions inherent in their conception, design, processes and functions. The photographic media and current information display systems can't fully stand in for a visual encounter. In the same way the microphone and loudspeaker cant fully stand in for an auditory encounter. We need to understand and account for the perceivers' share. Our communications systems reflect these shortcomings and can lead to incomplete, inefficient, and sometimes misleading impressions and ultimately poor decision-making.

This situation applies to all our virtual environments, communications systems and through them into the functioning of our organisations. They all lack a hands-on understanding of perceptual structure. There is a systemic problem that's holding us back causing issues that are not going to be overcome by increased efficiency or by combining existing technologies in interesting and novel ways. There is a self-created artificial ceiling that needs to be penetrated. For all kinds of reasons there is an imperative underlying this realization. Perceptually structured technologies and hence meaningful communications are a 'must have'.

Research papers

- "The average seven-year-old will have already watched screen media for more than one full year of 24-hour days. By age 18 the average European young person will have spent a full 4 years of 24 hour days in front of a screen"

The impact of Screen media On Children: A Eurovision For Parliament. Dr Aric Signam

How healthy behaviour supports children's wellbeing

https://www.gov.uk/government/publications/how-healthy-behaviour-supports-childrens-wellbeing

Screen time (including computer use for non-homework, watching television, DVDs and videos)

- Time spent playing computer games was significantly and negatively associated with young people's wellbeing.
- Television viewing has been associated with teachers'20 and parents'21 reports of children's attention difficulties, and with children self- reporting attention problems. 15, 22 Long-term research suggests TV viewing at younger ages (one to three years old) predicts later attention and hyperactivity difficulties (among seven-year olds) taking into account baseline level of difficulties.23
- Increased screen time and exposure to media (such as bedroom TVs) is consistently associated with reduced feelings of social acceptance, and increased feelings of loneliness, conduct problems and aggression. 15 22, 24 ,25, 26, 27

Public Health England 2013

How healthy behaviour supports children's wellbeing

- Increased TV viewing is associated with lower self-worth and self-esteem16, 19, 27, 28 and lower levels of self-reported happiness.19 The odds of children not worrying were highest in those who watched less than an hour on weekdays.6 Parents were also more likely to regard their child as unhappy if they watched a very large amount of TV.6 Specific types of internet activity (social networking sites, multi-player online games) have been associated with lower levels of wellbeing among children.19

- Children who spend more time on computers, watching TV and playing video games tend to experience higher levels of emotional distress, anxiety and depression.15, 17, 26, 29, 30 This relationship is particularly negative among those who engage in high levels of screen use (more than four hours a day).17, 26, 30

Public Health England 2013

How healthy behaviour supports children's wellbeing

- The evidence suggests a 'dose-response' relationship, where each additional hour of viewing increases children's likelihood of experiencing socio-emotional problems26, 28, 29 and the risk of lower self-esteem.28

- In the UK, 62% of 11-year olds, 71% of 13-year olds and 68% of 15-year olds report watching more than two hours of TV a day on weekdays, compared to Switzerland where the figure is less than 35% across all three age groups.5

- In England the proportion of young people playing computer games for two hours or more a night during the week increased from 42% to 55% among boys and 14% to 20% among girls between 2006 and 2010.10

Public Health England 2013