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RESEARCH ARTICLE

Changing Perceptions, Changing Lives – Promoting Intercultural Competence and Ethical Creativity through Advertising

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Few phenomena have incited as much passion as the unravelling of 'creativity' and few disciplines have brought about so many controversial expressions of it as advertising. In the bio-cultural framework of Intercultural Competence® the co-emergence of 'ethical creativity' is conceived to be pivotal for intercultural expertise. We suspect that interculturally competent individuals more habitually engage in ethical creativity, that is, the co-activation of a creative mindset and a benevolent moral mindset informed by a difference-oriented mindset towards the 'familiar other' as well as the 'unfamiliar other'.

In this framework, action is directly linked to perception, which, in turn, is influenced and shaped by the active creative mindset. To analyse ethical creativity as an intersecting process with the development of intercultural expertise, we designed and piloted a qualitative perceptuo-cognitive experiment including various advertising items to document the differences in perception of 34 leaders of small and medium enterprises and nongovernmental organisations (NGOs). The experiment consisted of 40 affective and culturalised visual items analysed with SR Research's *Data Viewer* software. The eyetracking data were translated and clustered into gaze types and combined with the response patterns from the questionnaire for analysis. 'Ethical creativity' is regarded as a dynamic process emerging through the co-activation of benevolent, moral mindsets. A specific perceptual architecture emerges from the convergence of various sets of expertise. The process of becoming interculturally competent and being able to enact ethical creativity is linked to advertising campaigns. Such interactions (of perception with activation of mindsets) have the potential to profoundly shape the behaviours and understandings of consumers.

Keywords: intercultural; ethical creativity; perception; action; advertising; cultural neuroscience

Introduction

Few phenomena have incited as much passion as the unravelling of 'creativity' – and few disciplines have brought about so many controversial expressions of it as advertising. In trying to design strategies to create a dialogue with the consumers, 'creativity' has often been perceived as quite akin to pixie dust: the magic ingredient that somehow manages to transform a pedestrian campaign into a full-blown success. However, in the 21st century, the mantra for success has changed and more ethical qualms have become attached to the once unconditional credo of 'creativity for creativity's sake'. Often, creativity was conceived as 'amoral', like Mark A. Runco (2010), for example, who argued that creativity is neither right nor wrong, and creators cannot be held responsible for the consequences of their creations. Consumers, on the other hand, have started to hold people and businesses accountable for their work. Such enactments of a social conscience thwart Runco's main idea that 'the process that underlies all creative things is not moral or immoral, ethical or unethical, good or evil. It is essentially blind' (Runco, 2010, 15). Especially in the corporate realm, displaying humanitarian concerns, and being perceived as authentic in 'doing good' has become increasingly important (see Mukherjee, 2020). Consumers have grown more and more sensitive to direct and indirect forms of discrimination and seem to have become less willing to turn a blind eye towards ethical concerns. In multicultural environments anchoring visual expressions and ensuring interculturally sensitive, as well as ethical meaning making on an individual level, presents a novel challenge that creative teams are facing at present. We suggest here that analysing the intricate entwinement of creativity, ethics and culture will give a clearer picture of how future advertising efforts can be successful – not simply in generating more sales and profits, but in contributing to social change. Since social change always necessitates conceptual changes, it is important to understand how these concepts affect the ways that people interact with one another.

For a long time the standard definition of creativity used to be based on two criteria: 'Creativity requires both originality and effectiveness' (Runco and Jaeger, 2012, 92), a third criterion possibly being that creative ideas must be novel, valuable and surprising (Boden, 2004). However, the definition as well as the operationalisation of the concept of creativity has been an arduous journey of unfolding multiplicity. And, after more than 50 years of research, one has to grudgingly face the fact that there still aren't any satisfactory definitions or valid measures of real-world creativity (yet). When advertising for the human good, however, we claim that every conceptualisation of creativity in our multicultural environments must be inextricably bound to a specific idea of ethics. Redefining creativity to include ethical criteria requires informed individuals with an integrated understanding of culture and morality. It is argued that intersecting sets of expertise must be activated and enacted by creative individuals in specific culturalised situations and contexts in order to elicit ethical creativity. Take, for example, the international fashion brand Dolce & Gabbana (2018) and the creative advertising agency Saatchi & Saatchi (2003). Both released 'creative' advertisements that were perceived by the public (for example, Chinese fashion enthusiasts and the South African government) as derogative and racist. Apart from being offensive and costing the enterprises billions of dollars, the pending question seems to be: who are the people who are able to create a new dialogue with the consumer in multicultural and VUCA (volatile, uncertain, complex and ambiguous) environments? It is claimed here that refusing unethical behaviour and advancing creative ideas beneficial to the common good requires the co-activation of certain mindsets on an individual level. We propose that predominantly creative products (for example, advertising campaigns) by individuals, who activate intersecting ethical and cultural sets of expertise when conceiving the products, can trigger people's intrinsic and pro-social motivation and are able to initiate change in people's actions. In line with Paul

Thagard (2019) we propose a focus on the interconnections among individual minds (brain and minds) and societies. In viewing social construction and 'individual' cognition as interconnected, Thagard criticises that much of sociology seems to be under the postmodernist assumption that everything is constructed on the basis of social relations, such as power, with no connecting it to how people think about each other. He suggests that '[o]vercoming discrimination requires changes in social norms, which are conscious and unconscious emotional rules rather than rational choices' (Thagard, 2019, 17). Thagard's hypothesis (19) that all social change results from mental mechanisms in individuals and from social mechanisms for the interactions of thinking individuals, intriguingly weaves together a multilevel tapestry of social construction and individual cognition. This leads to specific social phenomena, such as that in present-day societies, responsibility and accountability is conveyed to the creative people behind the campaigns.

In order to link creativity, ethics and culture to analyse dynamic perceptions and mindsets for social change, we draw on the enactive, bio-cultural framework of Intercultural Competence® (in short: ICC®, read: 'Intercultural Competence revisited') and its Culture and Creativity Model (Breninger, 2020). ICC® considers the co-emergence of 'ethical creativity' to be pivotal for cultural expertise, which again is necessary to act for the 'common good' of a multicultural society. Based on this it is assumed that interculturally competent individuals more habitually engage in ethical creativity, that is, they co-activate a creative mindset and a benevolent moral mindset informed by a difference-oriented mindset towards both, the 'familiar other' and the 'unfamiliar other'. In the Culture and Creativity Model (CuCro), action is directly linked to perception, which, in turn, is influenced and shaped by the active creative mindset. Intercultural response patterns are considered to be necessary for a genuine moral commitment in multicultural environments. In the following sections we introduce the theoretical frameworks and provide samples from the perceptuo-cognitive experimental pilot, to give an idea of how an analysis of ethical creativity as an intersecting process with cultural expertise is possible. Ultimately, we emphasise that social change must be initiated by a specific set of mental mechanisms that need to work in tandem with the social mechanisms and suggest that cultural expertise plays a pivotal role in the future of advertising for the common good.

Selected theoretical avenues

Intercultural Competence® framework

In uncertain and fast-moving multicultural realms we have to consider the dynamic co-emergence of an individual and it's environment: 'Living beings shape the world into meaningful domains of interaction and thereby bring forth their own environments of significance and valence' (Thompson, 2007, 154). Particularly in regard to 'Western' consumer societies, new values have emerged over the last decades questioning the pillars of capitalism. Altruistic ideas, such as 'social responsibility', 'accountability' and the 'common good' have moved into the limelight of societies and have changed more traditional ideas about the role of advertising. It is argued here that an integrated perceptual architecture has to be functional on an individual level in order to stimulate change for the social good through products (for example, advertising campaigns). To elaborate on this we draw on selected ideas from the bio-cultural framework of Intercultural Competence® (Breninger, 2020) linking cultural expertise to actions that are informed by a genuine pursuit of creating more caring, equal and just societies.

Intercultural Competence® (in short: ICC®) is an enactive framework claiming that if a fully functional PACA-system (that is, highly interlinked perceptive-affective-cognitive-action systems) regarding cultural otherness (that is, people and objects or events) is in place, the actions (and as we argue here also the acts of creation) by the individual will be informed by

pro-sociality. An enactive view takes into account lived (culturalised) experiences and reflexivity by trying to provide an all-inclusive framework to articulate the numerous domains and levels of organisation claimed here to be involved and interacting for intercultural competence and ethical creativity. The unique facet of the Intercultural Competence® framework is that it is built on enactive theorems and hence bound to actions. One of the main hypotheses is that genuinely interculturally competent people regularly 'walk the talk' since they have integrated interculturality as a value on a neural level and have to act accordingly even in adverse settings. In ICC® intercultural competence is:

1. based on the neurobiological integration of cultural otherness in individuals; and
2. conceived as intersectional – that is, it necessitates the convergence of other dynamic processes, such as moral and gender expertise as well as creativity.

According to the Intercultural Competence® framework, cultural expertise (used synonymously with 'intercultural competence') requires a functional architecture of the PACA-system in regard to cultural otherness, that is, various cultural others (people) and cultural differences (objects, events, tasks and so forth) in order to develop the relevant neurobiological underpinnings for the relevant mental and social processes. This distinction between people and objects/events is crucial since the so called 'social brain' (that is, people are 'wired for WE') encodes and processes human beings in different ways (cf. Northoff, 2016). It is further claimed that integration of culturalised experience and knowledge in the PACA-system leads to understanding, and – in time, through habitualisation and neural interconnection – to cultural expertise.

In the Intercultural Competence® (ICC®) framework cognition is approached in an enactive and dynamic way, which means that the (living) organism is characterised as complex, self-organising, context-dependent, vastly variable, yet patterned and recurrent. In this context ethical creativity has to be developed from the person's experiences and actions (especially interactions and coactions with other people) in various situations and contexts via the neural integration of cultural otherness. ICC® builds on recent data from cultural neuroscience, pertaining that culture is embrained (cf. Northoff, 2016). The idea of an embrainment of culture (Northoff, 2016) propagates that the repeated engagement in a specific set of cultural tasks leads to a 'cultural conditioning of the brain', which again results in a certain expertise in decoding and encoding of the same compared to other culture members and tasks. It is further suspected that cultural expertise is largely based on familiarity with not only a stimulus (for example, a person) but also the stimulus in a specific situative context (cf. Northoff, 2016, 33). Hence, when it comes to 'seeing' the world, context, situation and change is everything – an enormous future challenge for experimental designs. Northoff's (2016, 33) idea of an encoding of sociocultural statistics into the brain's neural activity is crucial for ICC®. He argues that not only the encoding of the frequency distribution of stimuli (and thus natural statistics) is central in generating neural activity, but that various data also show that the same stimuli are processed in different ways in different contexts:

> The generated neural activity may then be based not only on the natural statistics of our target stimulus but also on its co-occurrence with other stimuli in its social and cultural context – its sociocultural statistics. In short, the brain may encode both the natural statistics and the sociocultural statistics of stimuli into its neural activity. (Northoff, 2016, 34)

This means, for example, that an individual's history of perceptions gives her/him a socio-cultural database, a kind of foundational bias, on which s/he builds her/his assumptions. With

the help of such assumptions people evaluate other people and situations. What's unsettling there is that the power of stereotypes and prejudice, for example, seems to be already rooted in perception.

The enactive idea that one learns to coordinate one's experience by coordinating one's behaviour in respect to others is pivotal to ICC®. This means that we are not dealing with detached, culturalised individuals who try to figure out or judge cultural difference, but need to address sense-making in interaction as a structured and at the same time structuring process (see De Jaegher and Di Paolo, 2007). Therefore we argue that analysing the interlinkedness between individual minds and socio-cultural settings (situations and contexts) at various levels means to analyse perceptions, since they are already entrenched with relevant experiences biasing the individual mind and the opinions and decisions of the respective communities. This, of course, leaves us with the big question: how can we analyse changing, culturalised perceptions?

In the Intercultural Competence® framework it is proposed that a 'new way of seeing', that is, a specific perceptual architecture, emerges from the convergence of various sets of expertise (as, for example, morality, gender and creativity). Such processes are supported by a vast amount of enacted understanding in specific (professional) as well as unspecific (private) contexts. The resultant 'new way of seeing' is based on a basic change in perception in regard to the main axis of cultural otherness (Breninger, 2020). Cultural expertise (that is, intercultural competence as defined in ICC®) is conceived as the successful integration level of relevant experiences of cultural others (people) and cultural differences (events and objects) in various situations and contexts into the dynamical PACA-system. Regarding expertise the integrative Intercultural Competence® framework outlines three basic levels of perceptual change as well as two transitory stages (T1 and T2) between them (cf. Breninger, 2020):

1. ethnocentric – one's own culturalised view is perceived to be the only viable and 'normal' one;
2. ethnorelative – one does accept the existence of other viable perspectives; and
3. intercultural – one is able to integrate various perspectives into a novel way of seeing and meaning making.

In **Figure 1** below the three phases – ethnocentric (EC), ethnorelative (ER) and intercultural (IC) – as well as the transitory phase 1 between EC and ER (T1) and transitory phase 2 (T2) are depicted.

We argue here that initiating socio-cultural change, as, for example, advertising for the social good, necessitates creativity – or rather, a certain kind of creativity, referred to as

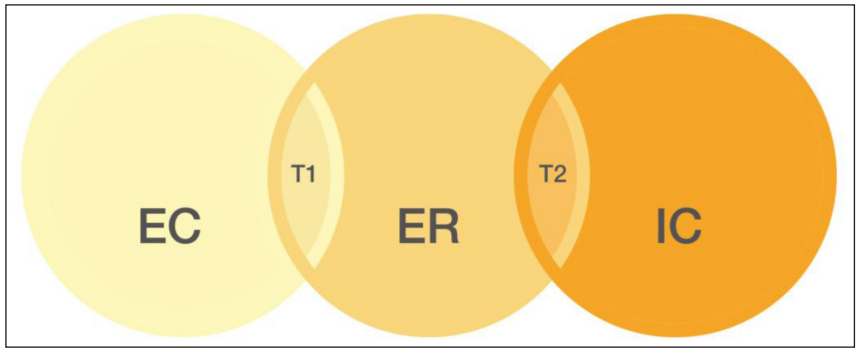


Figure 1: Intercultural Competence® framework.

'ethical creativity' in the Intercultural Competence® framework. Novel practices result from the interactions of people that require changes on an individual level (neural and mental mechanisms). According to the Culture and Creativity Model (CuCro) of the Intercultural Competence® framework (Breninger, 2020), an intercultural individual has been highly motivated to act and has a long history of acting in interculturally competent ways (that is, habitualisation). Therefore, s/he can, and is intrinsically motivated to, 'deviate into new perceptions' (Lotto, 2017, 15) and act creatively, for example, regarding decision making and problem solving in multicultural settings. Since people have different values mediating their utilisation of competences, it is important to evaluate the core competences intersectionally (as, for example, culture, ethics and creativity) on an individual level to determine to what extent integration has happened. This would allow us to assess the people who are genuinely able to create for the social good.

Culture and Creativity Model

In the Culture and Creativity Model (CuCro) (Breninger, 2020), 'ethical creativity' is regarded as a dynamic process emerging through the interaction and co-activation of creative and benevolent, moral mindsets in a specific situation and context. In the CuCro creative mindsets are prompted by 'real perception' enabling the individual to break out of what is considered conventional thinking styles and habituated affective as well as behavioural patterns in a specific situation[1] Moral mindsets are considered as dependent on the level of integration of cultural others (that is, people) and cultural differences (that is, events, tasks or objects) in the highly interconnected PACA-system (that is, highly interlinked perceptive-affective-cognitive-action systems) of an individual. The level of integration of cultural differences and others established (ethnocentric, ethnorelative, intercultural) entails the likelihood of certain moral mindsets (self-oriented, familiar difference-oriented and unfamiliar difference oriented) to be more regularly activated:

- the self-oriented mindset in ethnocentric individuals;
- the difference-oriented mindset towards the 'familiar other' in ethnorelative individuals; and
- the difference-oriented mindset towards the 'unfamiliar other' in intercultural individuals.

Hence, the CuCro claims that individuals are more likely to engage in 'benevolent' rather than 'malevolent' creativity towards cultural others the more fully the experiential integration of cultural differences and cultural others is established in the dynamic PACA-system. One can, of course, perform from a 'malevolent' or 'benevolent' creative mindset at any given time, however, since for an individual the pattern of moral mindset shifting represents her/his history of social experience and practice (Narvaez, 2014, 195), ethical creativity is very much dependent on the habituated co-activation of the undergirding moral and creative mindsets. Nevertheless, ethical creativity is enabled if the experiential integration of cultural differences and cultural others has been functionally set up in terms of direct experiences and the knowledge constructed by an individual.

It is important to emphasise that mindsets are not understood as ability-beliefs that individuals hold, like, for example, Carol Dweck (2006) does when she refers to such beliefs as 'self-theories' or 'mindsets'. In the Culture and Creativity Model (CuCro) the initial idea of cognitive psychology to conceptualise mindsets as 'the sum total of the activated cognitive procedures' (Gollwitzer and Bayer, 1999, 405) is abandoned for a more enactive conception of mindsets. The Culture and Creativity Model (CuCro) uses Darcia Narvaez's (2014, 195) definition of mindset that outlines mindsets to encompass:

1. an explicit, wilfully generated cognitive repertoire that an individual applies to people and situations; as well as
2. an implicit mind-body-emotion tendency including interpretative framing and preparation for action that one embraces more habitually on an unconscious level.

In order to differentiate between cognitive development and cognitive rigidity, the ICC® draws on Carol Dweck's (2006) distinction between:

1. fixed mindsets or 'entity' mindsets: the ability is static and cannot improve; and
2. growth mindsets or 'incremental' mindsets: the ability can increase with effort.

It is claimed that only growth mindsets can promote moral upshifting to the next phase (from ethnocentric, to ethnorelative to intercultural).

In the Culture and Creativity Model (CuCro), action is again directly linked to perception, which in turn is influenced by the active creative mindset. The idea of when a particular category of creative magnitude is active (for example, Big C, little c and so on), how this creative mindset iteratively influences and shapes the perceptual architecture in regard to cultural otherness is pivotal here. When mindsets shift, attention, automaticity, cue perception, filters, experiences, situations and goals are affected in certain ways. Hence, in this context the question is, how perception does change or can change considering the underlying active mindsets. In the Culture and Creativity Model (CuCro), it is suggested that mundane and routine styles of perception regarding cultural differences and others must be abandoned and more flexible, divergent and difference-oriented mindsets need to be activated. The problematic proclivity towards routinised 'groupthink' (Janis, 1972) and 'mindless thought processes' (that is, automatic, unengaged thinking; see Langer, 1978) and how they are destabilised by, for example, divergent thinking, has been analysed umpteen times. In the CuCro, however, it is claimed that perception lies at the heart of such processes and hence of creativity. In order to analyse perception in this context, David Bohm's distinction between habits of 'mechanical perception' and 'real perception' is adopted (2004) Bohm regards mechanical perception as preconceived ideas and learning that emanates simply from learning for specific utilitarian purposes. Real perception, on the other hand, is conceptualised to encompass the capability of seeing something new and unfamiliar. Hence, Bohm's conception of creativity is that the person must be able to learn and see something new and not simply impose preconceptions:

> [...] in a creative act of perception, one first becomes aware (generally non- verbally) of a new set of relevant differences, and one begins to feel out or otherwise to note a new set of similarities, which do not come merely from past knowledge, either in the same field or in a different field. This leads to a new order, which then gives rise to a hierarchy of new orders, that constitutes a set of new kinds of structure. The whole process tends to form harmonious and unified totalities, felt to be beautiful, as well as capable of moving those who understand them in a profoundly stirring way. (Bohm, 2004, 20)

This quote presages the 'weaving together' of textures (perception-affect-cognition-action systems) into a single, functional fabric, referred to as the PACA-system in Intercultural Competence®. Individuals do not bring things together that are far apart in their processing of information, which led Beau Lotto (2017, 215) to the statement that 'there is nothing creative about creativity', because what people see is just a history of their past perceptions. Lotto further advocates that people see the meaning of the information and not the information. That is why he refers to information as meaningless: 'Our assumptions create the light in which

we are able to see differently – or not, depending on how strongly we avoid exploring the shadows where keys to new paths may be hiding' (40). Lotto conceives of creativity as a very basic process that begins with the process of questioning such assumptions (215). Bohm, however, alludes to the idea of 'feeling out' for new differences. The idea that this emergent 'feeling' then leads to new orders and finally to a new structure is very much in line with enaction.

The CuCro draws on Bohm's ideas, claiming that individuals tend to be more 'mechanical' in perception when it comes to cultural otherness even though 'real' perception would be called for in order to be creative in their actions, that is, for example, to accomplish creativity in decision-making or problem-solving. Hence, the CuCro regards activating the more subtle capacity for original and creative perception in regard to cultural otherness as one of the key abilities in setting up an intercultural perceptual architecture. Bohm (2004, 30–32) further points to the challenge that, in order to become creative, one has to start noticing that the majority of actions by the individual and the society are in fact rather delicately limited by largely tacit and essentially mechanical constraints (that is, habitually applied preconceptions and prejudices). Bohm considers originality and creativity not as a result of an effort to achieve, for example, 'creative competence' or a decision that can be made, but 'rather as a by-product of a mind that is coming to a more nearly normal order of operation' (Bohm, 2004, 32).

In short, the CuCro considers the dynamic process of ethical creativity as emergent from the interaction and co-activation of benevolent, moral and creative mindsets, which are dependent on the level of integration of cultural otherness into the highly interconnected PACA-system of an individual in a specific situation and context. We propose here that ethical creativity is linked to the product resulting from the actions taken by the individual who manages to co-activate these mindsets. We refer to individuals here as C+ subjects if they have habitually co-activated moral and creative mindsets when integrating cultural otherness (that is, people and objects) and have acted upon it in several situations and contexts. C+ subjects are expected to come up more regularly with culturally sensitive ideas and products that result from enacting ethical creativity. Analysing the interlinkedness between individual minds and socio-cultural contexts at various levels means to analyse perceptions of real-world issues in a specific situation and culturalised environment.

It is important to note here that we do not talk about creativity being imposed on or into ethics or vice versa. Rather, moral and creative mindsets interact in various ways and affect each other over the integration of cultural otherness. In this process, they change the properties of each other: the individual involved, the situation, the wider socio-cultural context affected and so forth. This is why C– individuals in an organisation (see **Figure 2**) tend to indirectly or directly conceive and promote discriminatory campaigns. The C– subjects have not managed to integrate cultural expertise as a value and have a history of flawed or default decision making when it comes to the intersections of culture, ethics and creativity. It is deemed rather unlikely that C– subjects are able to create, for example, advertising campaigns for the human good.

In short, the idea of 'ethical creativity' is that a functional perceptual architecture is set up by the respective individual over time. This leads to a 'new way of seeing' supported by various value-informed processes (that is, various sets of expertise that have been integrated over several situations and contexts across the axis of cultural otherness). These processes need to converge for ethical creativity to emerge. In order to empirically put this idea to test an intersectional, perceptuo-cognitive experimental pilot was designed in an attempt to document the relevant perceptual architecture.

The unique link between perception and action theorised in the enactive Intercultural Competence® framework is the reason for using visual data (eyetracking) combined with

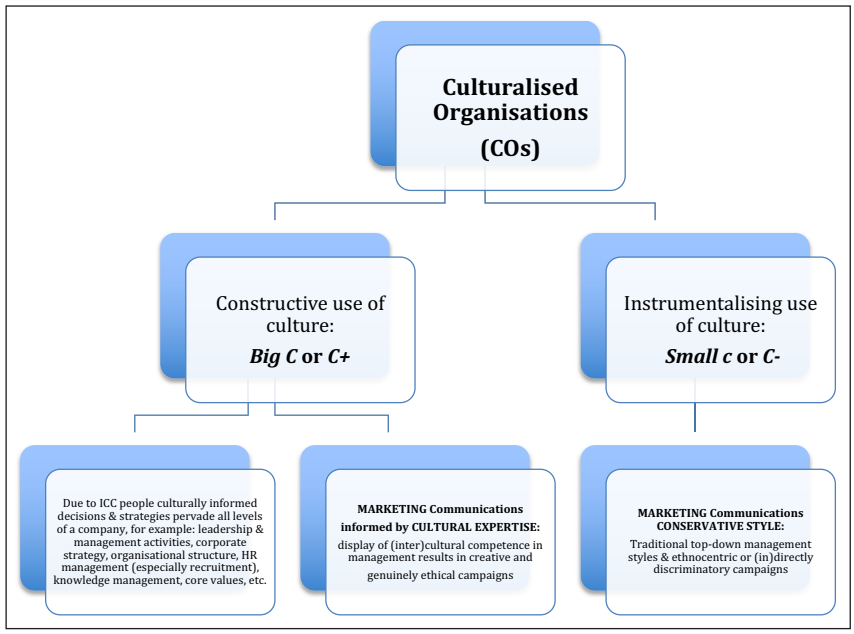


Figure 2: C+ and C– organisations: Use of culture and communications.

cognitively penetrated data (questionnaire) for the experimental pilot. The idea that the physical mode of 'seeing' and the culturalised, social mode of 'seeing' are inextricably interwoven in the phenomenon of perception lies at the heart of it. What is in general referred to as 'perception' is the subjective experience that results from stimulation of the senses by the environment. Since the perceiver frequently has no direct knowledge of how these experiences come about, perceptions are often considered as 'facts' shared by everyone in the same way due to the same exposure to an external, 'real' world. The equation of perception with this 'reality' has often been referred to as 'naïve realism' (Wade and Swanston, 2013, 78). In neuroscience perception is commonly treated as the product of an intricately intertwined, multilevel visual processing:

- the low-level visual processing, which is in charge of the detection of various types of contrasts in images;
- the intermediate-level visual processing, which is responsible for the identification of visual primitives such as contours, fields of motion and the representation of surfaces; and;
- the high-level visual processing, which integrates information from a variety of sources, leading to conscious visual experience (cf. Hudspeth et al., 2013, chapters 25–28).

Few researchers, however, have ventured to analyse perception from a multilevel integrative viewpoint, which is required to also grasp the dynamic and active quality of perception. Joaquin Fuster offers an intriguing link between perception and action by introducing his influential concept of the perception–action cycle. He claims that the hierarchy of perceptual knowledge is paralleled by the hierarchy of action knowledge:

> […] I alluded to long connections from posterior cortical areas to areas of the frontal lobe. These connections constitute the functional linkage between the two cortical

> hierarchies, one for perception in posterior cortex and the other for action in frontal cortex. The lowest stages of both hierarchies are the cortical processing areas at the interface between the cortex and the environment: sensory cortex at the input interface and motor cortex at the output interface. In the course of behaviour, the two hierarchies are engaged in a cybernetic cycle of dynamic interactions with the environment that I have termed the *perception-action cycle*. (Fuster, 2003, 74; emphasis in the original)

People's understanding of their environment is, in fact, highly subjective and forged not simply by the selectively acquired properties of the visual information by the perceivers' eyes but heavily constructed by a host of prior and past experiences of the individual. Already at the beginning of the 20th century James Jerome Gibson (1904–1979) identified a fundamental role for vision: vision's support for action (James Jerome Gibson, 1950, 1966, 1979). The idea that 'perception is for action' is fundamental to an enactive approach that understands cognition as a form of practice itself (cf. Stewart, Stewart, Gapenne and Di Paolo, 2010). An enactive approach overturns the main, classical assumptions of the representational theory of mind (RTM) (cf. Fodor, 1979; Newell and Simon, 1972). One of the central ideas of RTM is that the purpose of cognitive processing is the formation of mental representations. This premise is replaced by the assumption of enaction, that the purpose of cognitive processing really is the guidance of action (Engel, 2010, 221). It has therefore been suggested to abandon the concept of 'representation' and substitute it with the more enactive term 'directive', in order to adequately characterise the functioning of dynamic neural patterns of interactions in a cognitive system:

> […] neural patterns do not carry 'images' of the external world. What these patterns support are not abstract structural descriptions of objects and scenes but, rather, kinds of know-how about sets of possible actions that produces viable segmentations of the scene. Neural activity patterns, on this account, support the organism's capacity of structuring situational contexts; they 'prescribe' possible actions, rather than 'describing' states of the outside world. (Engel, 2010, 228–229)

ICC® focuses on the dynamic interaction that unravels cognition as the 'continuous coevolution of acting, perceiving, imagining, feeling, and thinking' (Thompson, 2007, 43). Such a comprehensive framework requires more action-based approaches, which do not view action and cognition as separate domains and argue that pragmatic skills (or the 'mastery of sensorimotor contingencies') are integral components of higher cognitive abilities, essential for their development (see also Pezzulo, 2015). Therefore, cognition is considered as 'enactive', which denotes a skilful activity that necessitates ongoing interactions with the environments. The theory of sensorimotor contingencies (SMCs) (O'Regan and Noë, 2001) is foundational to many enactive approaches; some researchers have considered enactive ideas useful, but confined to the understanding of sensorimotor engagements. SMC theory highlights the intimate link between perception and action systems, claiming that the cognitive processing of a living organism does not originate from a stimulus but rather from an action (usually an intention): 'By acting, a child causes regularities in sensorimotor patterns, which are then successively experienced. This permits a child to master the regularities in perception-action patterns, or SMCs' (Pezzulo et al., 2015, 50). Therefore, action plays a constitutive role for perception in SMC theory: 'seeing' is not to be understood as simply the processing of an 'internal visual representation' (as suggested by classic cognitive theorists) but corresponds to being engaged in a visual exploratory activity that is again mediated by knowledge of SMCs.

Hence, perceptual experience is not simply considered a state of brain, but a skilful activity that is partially constituted by the perceiver's implicit, practical knowledge of the way sensory stimulation alters with movement. This shift away from considering cognition isolated from action and perception, and away from a representation-centred framework established on database-serving planning, turns out to be more than promising regarding real-world settings. To sum up, SMC theory holds that the quality of perception is constituted by mastery of SMCs, that is, the statistical relation of sensory changes and an individual's own actions (O'Regan and Noë, 2001). In other words, SMCs can be considered as regularities, which govern how sensory stimulation depends on the activity of the perceiver.

Another important link tying perception and action comes from expert research: expertise substantially relies on perception (cf. Gobet, 2016). It is perception that allows experts to rapidly categorise a problem and therefore 'see' more or different cues than a novice. A considerable amount of research has been carried out in various disciplines and applied fields, starting in the mid-1960s with Adriaan de Groot's research on chess players (De Groot, 1965). When analysing chess players, de Groot found very early on that the world champion had a better understanding of the position after 5 seconds than a strong amateur had after 15 minutes (cf. Gobet, 2016, 12). Based on the assumption that the first few seconds of seeing must hence be critical for its understanding, de Groot figured that perception has to play a key role when it comes to developing skills. It was also shown that, rather than seeing individual pieces, experts see large complexes, in which perceptual and dynamic possibilities are interwoven (De Groot, Gobet and Jongman, 1996). What seems to be the case here is that instead of seeing static constellations of pieces, experts notice dynamic possibilities more often.

With the advent of eyetracking technology, recording eye movements to document skill differences in perception not only in chess but also in medicine, sports, the arts and so forth became popular (for overviews see Duchowski, 2007; Holmqvist et al., 2011; Liversedge, Gilchrist and Everling, 2011; Reingold and Sheridan, 2011; Wade and Tatler, 2005). A number of studies, particularly in the field of medical expertise, have been concerned with the pattern of eye movements, which point to more 'efficient' scan paths (fewer fixations and fewer but longer saccades) in experts as well as to the use of peripheral vision guiding their search (Kocak, Ober, Berme and Melvin, 2005; Krupinski et al., 2006). In sports, for example, Helsen and Starkes (1999) found skill differences with detection tasks related to football: experts make fewer fixations before making a decision and fixate the important aspects of the display quicker. Both, football and chess experts hence focus on more important areas of interest (AoIs) than novices and are more selective in where they look. The study of expert perception has also given rise to the field of perceptual learning (cf. Goldstone, 1998; Lu et al., 2011; Sasaki, Nanez and Watanabe, 2010).

Studies of how perception changes as a function of experience and how such changes help the organism to adapt to various environments through learning and acquisition of knowledge as well as of other systems, have been prominent. Various relevant phenomena surrounding visual perceptual learning (VPL) and perceptual experience have been uncovered over the last years (for a detailed overview see Gauthier, Tarr and Bub, 2010; Goldstone, 1998), as, for example, that perceptual learning involves long-lasting changes to the perceptual system of an organism. This improves the organism's ability to respond to its very specific environment and is also caused by this environment (Goldstone, 1998, 586). Especially when it comes to human and visual expertise development, eye movement paradigms have played a significant role in supplementing more traditional measures of performance, such as reaction time, accuracy and verbal reports (for an overview see Reingold and Sheridan, 2011). In the following experimental pilot we draw on this knowledge and translate it for the sociocultural realm.

'Novel ways of seeing': The perceptuo-cognitive experiment

In order to visualise 'novel ways of seeing' informed by cultural expertise we provide selected visual data from the perceptual-cognitive pilot (for the entire experiment refer to Breninger, 2020). We present one stimulus from the qualitative pilot study here, to show how one can approach visual data and perceptual change experimentally. For this purpose the infamous Kinder chocolate package has been translated into a visual stimulus of our perceptuo-cognitive pilot. Due to the cultural relevance of this stimulus around the time of the experiment, we hoped to elicit culturalised, affective response styles. In general, Kinder chocolate has faced various challenges of how to 'modernise and internationalise' the image of the well-known 'blonde boy' on the packaging – dearly loved by generations of dedicated chocolate consumers in Germany and Austria. In 2012 (Ferrero Kinder), for example, the 'New Face of Ferrero' competition launched in the UK aimed at featuring different faces on the packaging and create public participation in the difficult face-selection process. This competition was heavily criticised on account of being discriminatory since only white, photogenic children had been chosen as winners and had found themselves depicted on the Kinder chocolate packaging. In 2016 (Ferrero Kinder Face) Kinder chocolate launched another controversial marketing campaign in Germany featuring pictures of children's faces belonging to the national heroes of the German football team. The Ferrero marketing team was criticised for propagating more subtle forms of racism by sending the meta-message of only 'tolerating culturally different Kinder faces' on their packaging as long as they were successful in terms of being beneficial to the German nation.

When the experiment was conducted in Austria, this Kinder chocolate campaign was in everybody's mouth. We therefore designed the following stimulus no. 39 'Kinder chocolate' as part of our perceptuo-cognitive pilot combining eyetracking data with questionnaire data. The entire perceptuo-cognitive experiment consists of 40 visual items that needed to be affectively charged, culturalised and shared to a certain extent: 16 main stimuli and 24 distractors (for details see Breninger, 2020). We designed all 40 naturalistic and situated visual test items with culturalised affective value in order to show the difference in visual data between ethnocentric, ethnorelative and intercultural individuals. The 'affective items' of the experimental pilot obtained their affective meaning by their association with some degree of pleasantness or unpleasantness and some degree of arousal in an individual's experience. The term 'affective item' refers to the meaning that has been acquired by an object or event through culturalised experience and iterative encounter judgements (cf. Slovic, Finucane, Peters and MacGregor, 2007 for a discussion with regard to affect-laden images). All the visual stimuli were designed to function with an SR Research, Eyelink 1000 desktop eyetracker. Stimuli were programmed in Visual Studio C++ to run with SR Research's *Eyelink Display* software (SR-Research, 2011b). The eyetracking data were analysed with SR Research's *Data Viewer* software (SR-Research, 2011a). All relevant eyetracking data (dwell time on AIs [areas of interest in ms], cumulated dwell time [%], fixation count, presence and absence of saccades to and from AIs) were translated into Excel. The categories for the gaze types (1. saccades; 2. fixations: duration and frequency; 3. reading and scan paths; 4. reaction time; 5. gaze cascade effects) were modelled on two insights from pertinent literature concerning eye movements and visual expertise (for an overview see Gobet, 2016, chapter 2; Reingold and Sheridan, 2011, chapter 29): the idea of an encoding advantage of 'cultural experts', which is significantly related to experience (cf. Reingold, Charness, Schultetus and Stampe, 2001) and to superior encoding (cf. Reingold and Sheridan, 2011). The perceptuo-cognitive experiment was conducted as a pilot with 34 subjects (26 females and 8 males), of whom 15 had a leadership background and of which 7 subjects had never worked in/with multicultural teams. The mean age was 30.3 years. A total of 19 subjects had a monocultural (Austrian or German)

background and 15 subjects a multicultural background (holding Austrian citizenship with one of the following birth countries: USA, Yugoslavia, Poland, Iran, Thailand, the Caribbean, France or Romania). Subjects were informed that their accuracy in assessing situations of a multicultural workplace was tested. Due to the idea of an embrainment of culture (Northoff, 2016) advanced in the Intercultural Competence® framework, we had to assess the integration level in terms of situation and context as well as in regard to familiarity. Each stimulus was therefore coded in the following way (SIT 1–4):

1_private sphere (private: close familiar other);
2_workplace related (public: close familiar other);
3_society related (public/in-group: distant familiar other); and
4_globally related (public/out-group: unfamiliar other).

This kind of clustering allowed us to ascertain later for which section more experience is needed to achieve full integration of cultural otherness into the PACA-system on an individual level. The experimental design of the perceptuo-cognitive pilot also had to consider the intersectional approach required by the Intercultural Competence® framework. Therefore, stimuli were designed to assess intercultural competence in an intersectional way with morality, gender sensitivity and creativity. In line with the Intercultural Competence® framework (cf. Breninger, 2020), we expected the following three kinds of responses to the Kinder chocolate stimulus below (SIT 3_society related). If cultural expertise has to develop in tandem with moral expertise and creativity in order to give rise to ethical creativity, the three distinct gaze patterns and response styles should co-activate more habitually with the following mindsets:

1. The ethnocentric (EC) phase is more habitually prompting responses that can be clustered as resulting from a self-oriented moral mindset (SoMS) producing mostly uncreative actions regarding cultural otherness;
2. The ethnorelative (ER) phase is more habitually prompting responses that can be clustered as resulting from a difference-oriented moral mindset towards the 'familiar other' (FoMS) producing more often creative actions regarding cultural otherness;
3. The intercultural (IC) phase is more habitually prompting responses that can be clustered as resulting from a difference-oriented moral mindset towards the 'unfamiliar other' (UoMS) producing dominantly ethical creative actions regarding familiar and unfamiliar cultural otherness.

The question asked upon display of the stimulus was: which child should be the new face of Kinder chocolate? After answering the question, subjects were requested to elaborate on their decision. To give an impression of the kind of data yielded by the combined eyetracking and questionnaire paradigm, we illustrate selected eyetracking protocols and refer the avid reader to the full experimental and theoretical outline (Breninger, 2020). The gaze protocol in **Figure 3** depicts a prototypical gaze pattern of an ethnocentric gaze, prompting more habitually answers that can be clustered as resulting from a self-oriented moral mindset. The prototypical ethnocentric gaze (EC) reveals no fixations on culturally relevant symbols, shorter and very few fixations on racially and/or religiously coded items and results in very fast preference decisions (decision time: 4,360 ms). The answer provided by this EC subject was: 'The blonde boy he belongs there and fits best'. Use of system justification motives and familiarity preference decisions are often the case in ethnocentric responses.

Another interesting aspect is that one can clearly see that the gaze is biased not only towards the blonde boy but also ignores the faces of the girls, that is, the subject looked at the girls

too shortly to consciously consider them as a real alternative to the blonde boy. This is why an intersectional, visual analysis is so important: the subject did not even 'see' the girls since they are not a viable option to him/her in this decision-making context. In **Figure 4** below an ethnorelative gaze pattern is depicted that prototypically reveals fixations on culturally relevant symbols, longer and more fixations on all faces that were more or less equally distributed. In this gaze protocol cumulative fixation duration within the Areas of Interest (AIs) is distributed fairly equally across the four face AIs. Decision-making time was slightly longer (12,706 ms) but not biased towards the familiar blonde boy. Ethnorelative (ER) subjects do not present with system justification motives, however they tend to engage in stereotypical thinking (although not across all situations). The ER subject chose the Asian girl, providing us

Figure 3: Subject A – ethnocentric gaze and gender bias (does not consider the girls).

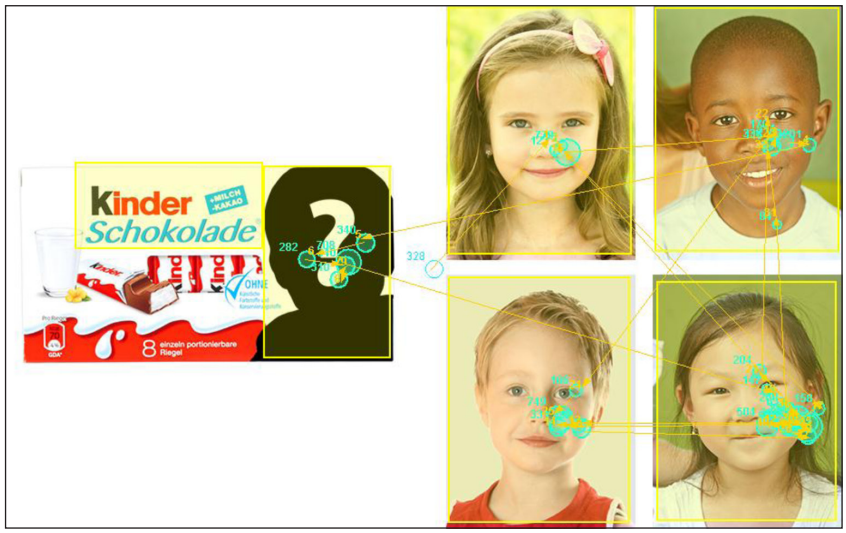


Figure 4: Subject B – ethnorelative gaze.

with the following answer: 'The little Chinese girl, it's time to introduce diversity and gender into the Kinder marketing kerfuffle'.

Intercultural subjects are expected to not only consider culturally relevant symbols, but to have significantly longer and more fixations on all the candidates that are equally distributed. Decision-making time takes much longer, since they ought to consider cultural and situational complexity as well as apply individuation processes to the depicted faces (decision time in this case: 22,669 ms). The answer of the subject presenting with an IC gaze illustrated in **Figure 5** was: 'This is a very difficult decision to make especially against the troubled integrations background of cultural diversity in Austria. On the one hand it is time to portray a different face in terms of gender and race on the other hand the racist association between the young boy's black face being as "sweet and chocolaty" must not be reinforced. A new "normality of difference" should be aimed at, however, the majority of the Austrians may not be ready for this. I would, nevertheless, choose the black boy to provoke radical change here.'

Figure 6 illustrates a prototypical gaze protocol of what was clustered as moral hypocrisy (gaze=EC; response=ER). By moral hypocrisy, we mean that individuals want to appear moral

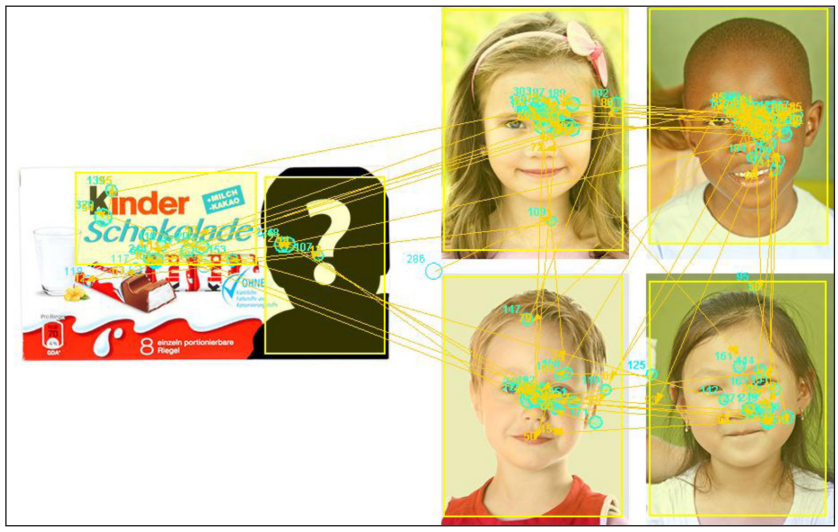


Figure 5: Subject C – intercultural gaze.

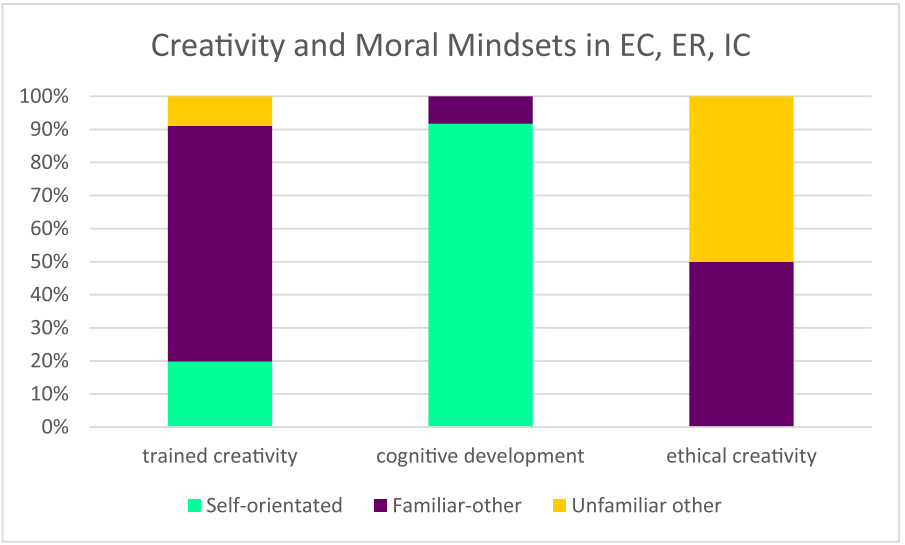
Figure 6: Subject D – moral hypocrisy.

but, if possible, avoid the cost of actually being moral (Batson and Thompson, 2001, 54). The answer delivered by the subject (Austrian/monocultural background) was: 'I would put the African boy on the package, one has to make a change when it comes to making race more visible'. The subject is able to 'talk the talk' (ethnorelative response) but we would not expect this person to act on the stated empowerment concerns. According to the Intercultural Competence® framework (Breninger, 2020), when the culturally 'unfamiliar other' is concerned, empowering action needs full integration on all PACA levels (perception-affect-cognition-action) and an active moral mindset informed by a certain level of cultural expertise. We suspect only 'superficial' moral commitment towards the 'unfamiliar other' since empathy has not been extended to the unfamiliar other (Breninger, 2020). The Intercultural Competence® framework predicts that this decision will lead to 'cosmetic/superficial' action, nonaction or indirectly 'unjust' system-serving action. Moreover, ethnorelative subjects very often ignore the specificities of situations and particularity of different cultural contexts. This is why an intercultural response pattern is necessary for genuine moral commitment in a multicultural environment.

Apart from yielding more detailed data, we found that while any individual can operate from any mindset at any given time, ethical creativity is prompted more habitually in intercultural individuals as depicted in **Table 1** below.

In order to further visualise how cultural, moral and creative mindsets are interconnected, we depict a culturally relevant stimulus from the creativity set. In 2010 Austria's second largest dairy company, the NÖM (short for: 'milk from lower Austria'), introduced a new 'bilingual' packaging (German–Turkish: 'Türk Süt') with 'the eye of Fatima' as a religious symbol of luck and good fortune printed on it. This packaging met with a public outrage by many Austrians and even led to boycott calls concerning all NÖM products. The spokesperson of NÖM justified the new packaging by stating that the Turkish community consumes rather large amounts of dairy products and the company only tried to be more appreciative and integrative of 'them' (that is, the Turkish consumers). Additionally, the new packaging was presented as an advertising strategy to make the Turkish community buy more 'Austrian milk'

Table 1: Creativity, morality and cultural expertise: ethnocentric (EC) (left column), ethnorelative (ER) (middle column) and intercultural (IC) (right column).



instead of milk imported from Turkey. As emphasised by the spokesperson of NÖM in the media: this milk is for Turkish people who don't speak German (it's easier for them to know what they are buying) and NÖM doesn't supply the 'Austrian supermarkets' with the 'Turkish milk packaging' anyway. Only 'Turkish supermarkets' in Austria are going to stock this product. Against this heated and heavily mediatised cultural backdrop we designed stimulus no. 10 'SÜT milk' and asked the subjects in the perceptuo-cognitive experiment: 'Do you think that one should also be able to buy the "Türk milk" in Austrian supermarkets?' And if they answered 'yes', we further enquired: 'Would you buy the "Türk milk" in the Austrian supermarket and why?'

One subject, for example, presented with an EC gaze pattern (no fixations on culturally relevant symbols, shorter and very few fixations on racially and/or religiously coded items resulting in very fast preference decisions) and an ER response style: 'Yes, of course. I'd buy it, why not, it is the same milk' see **Figure 7**). Following the Intercultural Competence® framework this subject will not act on her/his words since acting requires an integrated PACA architecture requiring at least an ER gaze. This protocol can be clustered as 'social desirability' (EC gaze and ER answer) – a phenomenon emerging in transitory stages with predominantly fixed mindsets underlying them.

In **Figure 8** one can see how an intercultural gaze and an intercultural response tie in with decisions informed by ethical creativity. The subject answered: 'Of course I do. But I don't think that this kind of blunt ethnomarketing should be done, after all placing this religious symbol clumsily on a rather familiar Austrian package reminds one more of faking to be intercultural in order to make some money. Instrumentalising culture by defining "other people's" needs from a nationalist-capitalist stance simply reinforces "strangeness" and "difference" and makes "otherness" the basis for cultural encounters'.

As depicted above, at the intersection of ethics and creativity we need to evaluate experimental data more carefully and focus more on the quality of data. According to preliminary

Figure 7: Türk milk stimulus no. 10: EC gaze and ER response.

Figure 8: Türk milk stimulus no. 10: IC gaze and IC response.

insights of this perceptuo-cognitive experimental pilot, combining visual data (implicit) with cognitively penetrated responses (explicit) will provide a novel facet of assessing cultural expertise and allow a more detailed analysis of data.

Conclusion

In order to authentically advertise for the social good and initiate change on a socio-cultural level through products and events, we need to better be able to explain how minds make societies and elaborate on the intricate links and interactions between individual brains and societies. It has been claimed here that weaving together perceptual and affectuo-cognitive processes with social phenomena will ultimately grant us an understanding of socio-cultural change. We have further argued that introducing change via products, as, for example, advertising for the social good, necessitates a specific functional perceptual architecture on an individual level. Evaluating processes of people able to recognise the complexity of situations in multicultural settings and respond to them in increasingly flexible, sophisticated and creative ways is considered pivotal. We have argued that a certain kind of creativity, referred to as 'ethical creativity' in the Intercultural Competence® framework, is essential for this change to occur. Ethical creativity is emergent from ethical and creative processes that have successfully been integrated over the axis of cultural difference. From our point of view ethical creativity is interconnected and hence intricately tied to a specific perceptual architecture allowing individuals to genuinely create for the common good. In order to document the respective perceptual architecture gaze protocols have been analysed in tandem with subject responses. Combining the two data sets yielded promising, more complex data, which is ultimately needed for the assessment of individuals able to create for a genuine change for the good of all. The integration of (cultural) difference in one's highly interlinked perception, affect, cognition and action systems (PACA- system) in tandem with ethics and creativity has been regarded as necessary for

the 'novel ways of seeing' emergent from this new perceptual architecture. In order to provide some initial evidence for this argument, we drew on the Intercultural Competence® framework outlining the integration of cultural difference in neuro-cultural ways and its intersectional Culture and Creativity Model (CuCro). As an enactive framework that ties competence to action, it is able to account for changes in perception that become evident in vision. Thereafter we introduced two sample stimuli from the complex perceptuo-cognitive experimental pilot to show how the level of cultural expertise can be more fully assessed with the help of eye-tracking data. A prototypical gaze protocol of the three gazes distinguished in the Intercultural Competence® framework (ethnocentric, ethnorelative, intercultural) as well as an example of how moral hypocrisy and social desirability can be documented in vision was introduced. With the help of the questionnaire more explicit, 'conscious', culturalised social-cognitive processes were analysed in tandem with the gaze protocols that permitted us to examine more implicit, 'unconscious', culturalised social-perceptual processes. Yet gaze types and response styles do not always match, therefore more complex theoretical avenues have to be devised in order to explain this gap (see Breninger, 2020). Further real-life data has to be collected to extend this experimental pilot and be able to come up with a population-wide statistical analysis. Important thereby is to not simply collect more data but to 'improve the quality of scientific research by taking it out of the artificial situation of a lab and into authentic human situations' (Lotto, 2017, 14) – the real world, that is where the brain makes sense. More relevant real-life data has to be obtained regarding the integration of cultural difference at its various intersections and needs to be interpreted situationally, within a specific culturalised context. For this purpose we have to become creative regarding the experimental setup as well as the methods and instruments employed. The unique perceptuo-cognitive experimental design enabled us to reveal the importance of the individual level of cultural expertise for being able to 'see differently' – a basic requirement for initiating socio-cultural change.

Note

[1] Such mindsets have to be growth mindsets, that is, in development, not static (for an extended discussion of moral and creative mindsets see Breninger, 2020).

Ethics and Consent

The authors confirm that consent to publish has been obtained from the participants to report individual data.

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Competing Interests

The authors have no competing interests to declare.

Author Contributions

We hereby declare that both authors made substantial contributions to conception and design, and acquisition of data, as well as analysis and interpretation of data. Both authors participated in drafting the article and revising it critically for important intellectual content; and both authors have given final approval of the version submitted.

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