The demanding world of emotion:

A Gestalt approach to emotion experience

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Abstract

World-focused emotion experience (WFEE) is how the world appears or is consciously perceived in one's emotion experience. For example, when happy the world may seem especially beautiful, or when sad the world may seem empty or barren of possibilities. What explains these kinds of experiences? WFEE has been relatively neglected by emotion theory, but is clinically relevant. This article discusses explanations of WFEE from phenomenology and Gestalt psychology. Influenced by Kurt Lewin, I propose an "emotional demand model" of WFEE. Emotional demand is defined as an impelling property of the world which exists because of one's emotional state (of readiness for action). It is a concept with connects striving (in the self) with value (in the world), both of which are important from an evolutionary point of view. This theory explains the neglected distinction between the expressive and demanding qualities of emotional objects and has implications for emotion regulation, autism, and theory of mind.

Keywords: Emotion; world-focused; phenomenology; Gestalt, demand character; Lewin; autism; theory of mind

Highlights:

- Psychology is biased towards thinking of emotions as feelings rather than as experiences of the world. But they are both.

- The best way to explain world-focused emotion is as the experience of "demand" in the world (the Emotional Demand Model).

- For example, an angry face may be seen as "scary" (what is *demands* for me) rather than as "angry" (what the other person is *expressing*). Infants and individuals with autism may experience faces in a more "demanding" manner.

- This model highlights another tool for recognizing our own emotions: noticing when we feel "demanded of" by the world; with implications for emotion regulation.

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"At that time ordinary objects—chairs, tables, and the like— possessed a frightening, menacing quality...Time itself changed. The day went on for ever; the nights lasted for centuries." (Rowe, 1978, pp. 269-70).

This description of an experience of depression captures something often missed out by theories of emotion. When we have an emotion, the world changes. It appears in a certain light. But when psychologists give examples of what it feels like to have an emotion, usually the examples are biased towards the self or the body (see the review by Lambie & Marcel, 2002). They typically mention tense muscles, gut feelings, bodily arousal, or feelings of "core affect" (pleasure and arousal). But the account of an experience of depression above describes a change in the world, not a change in myself, my body, or my feelings.

This is a key aspect of the conscious experience of emotion that is not well understood by emotion theory. It has been called "world-focused emotion experience" (WFEE) by Lambie & Marcel (2002). A rough definition is that it is experience of the world in an emotional light, or how the world appears or is consciously perceived in emotion experience. Its opposite is self-focused emotion experience, which is experience of oneself or one's body when having an emotion. For example, when I am angry I may be aware of my jaw being tight (self-focused) or I may be aware of you as a hateful jerk (world-focused). This can be a matter of selective attention (Lambie & Marcel, 2002). Theories of emotion from William James (1884) onwards have generally accounted more for self-focused emotion experience than world-focused emotion experience, and on the whole they do not even recognize that world-focused aspects of emotion experience are problematic or need to be explained. For example, emotion experiences are often viewed as bodily feelings of the

subject (James, 1884; Damasio, 1994) or other subjective feelings such as core affect (pleasure plus arousal) (Russell, 2003).

Of course, many theories of emotion include the "object of the emotion" as one of its components (Lazarus, 1991; Russell, 2003; Frijda, 1986), but how the object is experienced phenomenologically in emotion is often left underspecified or is reduced to appraisal (Lazarus, 1991), or is claimed to be unnecessary for emotion experience (Russell, 2003). For example, Russell (2003) describes his influential theory of core affect as a search "for primitive concepts in emotional processes that can exist without Objects" (p. 147).

This article, however, is explicitly about the experienced objects of emotion—how they are experienced from a first-person point of view and how we can conceptualize these experiences. The goal is to develop a phenomenology of world-focused emotion experience, to give an account of how the world is transformed in emotion experience. I will rely heavily on the gestalt approach to emotion experience developed by Lewin (1926) and Koffka (1935), which influenced Sartre's (1939/1962) work on emotion experience, and I aim to build on these important but often neglected insights.

The lack of an accurate conceptualization, let alone an accurate theory, of WFEE is a problem because several phenomena of emotion experience seem to depend on it. For example, several difficulties with emotional inhibition (e.g. anger disorders, borderline personality disorder), misattribution (e.g. seeing others as contemptible or threatening rather than oneself as contemptuous or anxious), and every day "unconscious" emotions can all plausibly be linked to a kind of emotion experience in which the subject is focused on the world rather than on herself (Lambie & Marcel, 2002).

1. The phenomena to be explained: Examples of reports of world-focused emotion experience

There are plenty of examples in everyday discourse of *self*-focused emotion descriptions. "I have butterflies in my stomach"; "I have an unbearable feeling"; "I'm shaking all over"; "I feel as light as air". But readers may be wondering what reports of world-focused emotion experience look like. See Table 1 for some illustrations.

[SEE NEXT PAGE]

Table 1

Examples of Reports of World-Focused Emotion Experience

Report	Emotion
"Everything seems more beautiful, natural, and desirable" *	Happiness
"This is so wonderful. Some people would do anything - that's so cool" †	Happiness
"What do you think you're doing, you're only a cyclist - you don't need the whole - you prat! Get out of my way, you idiot." †	Anger
"Why don't they just go home? They deserve a good beating" †	Anger
"Everything seems useless, absurd, meaningless" *	Depression
"Shit, it is horrid, what am I going to do, ugly thing. I close my eyes, it's still there, I cannot get image out of my mind" †	Fear
"Death – graves. Loss. What's the point?" †	Sadness
"It feels like every wall is closing in towards me…Tunnel vision describes it perfectly." ‡	Panic attack
"Pictured him with the prettiest girl in the photo. Thought, Yeah right, him faithful? Yeah, like f***!" †	Jealousy (romantic)
"Git, always gets what he wants, and I get to help. Brat, thick git, loser." †	Jealousy (sibling)
"The mannequins stood in unnatural angular poses. They seemed deeply malevolent…Indeed, this would be a key feature of my anxiety and depression…The sense that parts of the world contained a secret external malevolence that could press a despairing weight and pain into you" §	Anxiety
"How gorgeous you look tonight" †	Love

Note: Asterisks in the quotes are not editorial but were in the original report.

Sources: * = Davtiz (1969); † = Lambie (2017); ‡ = Holmes (2015); § = Haig (2018).

What do people mean when they say that, in their emotion experience, a spider looks horrid, the world seems malevolent, or a loved one looks gorgeous? When we have an

emotion experience (e.g. anger, love, fear, etc.) and some of the content of that experience is the world in an emotional light (e.g. a hateful, lovely, scary object, etc.), how are we to explain and characterize that world-focused emotion experience? What explains how the world transformed in emotion experience? The rest of this paper will attempt to unpack and answer these questions.

The strategy will be to first outline some definitions (section 2), and then to examine some of the earliest accounts of world-focused emotion experience from pragmatists and phenomenologists (section 3). Then in section 4, we will look at how the Gestalt psychologists Kurt Lewin and Kurt Koffka provide some useful conceptual tools that can be used to apply to world-focused emotion experience. These concepts – of demand character and hodological space – have been neglected by emotion theory, but section 5 will attempt a new synthesis of them in the name of the "emotional demand model". The implications of this new model will be examined in section 6.

2. Definitions

Before we proceed, this section will lay out some definitions, which broadly follow those given by Lambie & Marcel (2002). These definitions are stipulative and merely point to how key terms are being used here.

Emotions are taken to be bodily, evaluative, and attitudinal states or processes normally caused by or implying that something *matters* to the organism about the situation it is in. Mattering means that the situation is relevant to one of the organisms concerns, e.g. a concern for safety, or for looking after offspring, or for defending resources, etc. (Frijda, 1986). The emotion state is attitudinal in that (a) it is non-neutral, with regard either to (a part or whole of) the world or to the self, and so implying that something has been evaluated, and (b) it expresses how an organism is positioned in relation to something (e.g., being prepared to avoid or attack it). The attitude is typically physical, for example, one's body posture

getting ready to slump down in despair, or to attack in anger (albeit subject to inhibition), but there are also mental states and thoughts which accompany and reflect these physical attitudes. See also Dewey (1895) for a similar attitudinal definition of emotion.

With regard to the conscious aspect of an emotion state, *phenomenal emotion experience* (also, for brevity, "emotion experience") is defined as "what it is like" to be in an emotion state. Any aspect of the emotion state regarding which there is "something it is like" to be in or to have that state is part of phenomenal emotion experience. For example, this may include what it is like to experience faster breathing, or to see someone as to-be-attacked, or to feel a flush in one's face, or one's muscles as tense, or one's thoughts as racing, or one's situation as hopeless, etc. Phenomenal emotion experience does not imply that one is aware of emotion qua emotion. Animals may have phenomenal emotion experiences (in that there is something it feels like for an animal to be bodily aroused) without the animal ever being aware of "anger" or "fear" etc. as concepts. A further stage of attention and categorization is necessary for awareness of emotion qua emotion (Lambie & Marcel, 2002).

The distinction between *self-focused and world-focused experience* is one of content and experienced location. All perceptual experience is spatial, and one aspect of this spatiality is the sense of myself, and my body being "here" with a world being separately "out there". The nature of this kind of self versus world perception is that of a reciprocal figure-ground relationship. As Gibson (1986) has pointed out, exteroperception simultaneously specifies the spatiality of the world and one's own location and spatiality. For example, Lambie and Marcel write:

> Consider the situation of pressure contact between the pad of your forefinger and the horizontal edge of a table. Simply through a shift in attention, you can experience either of two things: (a) the sensation, in the inner end of your finger, of indentation and pressure, which has a shape and orientation; or (b) the perception of the edge of an external object, which has a shape, texture, orientation, mass, and location. The single informational state due to receptors in your finger in mechanical contact with

another object can lead to awareness of either of the above. These two experiential contents may not be strictly mutually exclusive—the bodily sensation may not entirely disappear when you attend to the object and vice versa—but their relation is (at least) that of alternative figure and ground (p. 236).

What of the terms "affect" and "feeling"? The term "affect" has had an inconsistent use in psychology (see the review by Batson, Shaw, & Oleson, 1992) and sometimes it is simply used interchangeably with "emotion", other times more specifically to refer the conscious aspect of an emotion (e.g. in Freud, 1926). In the "core affect" model of Russell (2003) core affect refers to a primitive non-reflective conscious feeling of pleasure-displeasure, and activation-deactivation. This usage of "affect" has been recently influential.

In the present article, the term "affect" will not be used. Insofar as affect refers to the *conscious* aspect of emotion, the term for this in the present article is "emotion experience". One aspect of emotion experience may therefore be core affect in Russell's sense, but as this is self-focused emotion experience (being a subjective feeling) it does not play a major role in this article. Insofar as "affect" may refer to the "subjective quale" of emotion over and above all the other aspects of phenomenal emotion experience – a kind of free-floating extra feeling to be added to the phenomenal experience of body, thoughts and perceptions— it is a matter of debate whether such free-floating feelings exist. For example, while some propose that the brain can produce, for example, free-floating anger or free-floating sadness, etc. (i.e. a pure feeling with no content other than "anger feeling" or "sadness feeling" (e.g. Cannon, 1927; MacLean, 1993; Oatley & Johnson-Laird, 1987), another more phenomenological tradition denies that such disconnected feelings exist. On this latter view, emotion experiences always have content; they are always about something, or attach themselves to an object (e.g. Dewey, 1985; Sartre, 1939/1962; Frijda, 1986; see Lambie & Marcel, 2002 for a more detailed account of this debate). Since the present article is only concerned with how the world

appears in emotion experience, we can bracket this debate about whether or not 'free-floating' or objectless emotions exist.

The term "feeling" also will not be used as a technical term in this article. It will be used only in an everyday sense to refer to bodily sensation, including those bodily sensations associated with emotion, and also loosely as a synonym for self-focused emotional experiences. Again, the overall technical term for the conscious aspect of emotion in the present article is "emotion experience".

3. Background: Pragmatic and Phenomenological Approaches to World-Focused Emotion

To begin our analysis, we need to look at early accounts of world-focused emotion, and to that end this section will look at the work of Dewey (1895), Sartre (1939/1962), and Merleau-Ponty (1945/1962).

Much theorizing on emotion in the 20th century was a reaction to William James's influential account of emotion as bodily experience. Although early critics such as Dewey (1895) pointed out the neglect of the world in James's account, later psychologists arguably compounded the error by simply focusing on other self-focused aspects such as brain-produced "subjective feelings" (Cannon, 1927; Oatley & Johnson-Laird, 1987) or "core affect" (Russell, 2003).

James famously wrote that "My theory . . . is that the bodily changes follow directly the perception of the exciting fact, and that our feeling of the same changes as they occur IS the emotion" (1890/1981, p. 1065); and "If we fancy some strong emotion, and then try to abstract from our consciousness of it all the feelings of its bodily symptoms, we find we have nothing left behind" (p. 1067). This view of emotion firmly placed it as a subjective feeling, as the feeling of one's own body: an emotion is the experience of trembling, shaking, of one's pounding heart, and so on. The object of the emotion – for example the bear we encounter in

the woods – was relegated to a causal role. The bear for James is the "the exciting fact", the perception of which *causes* the bodily changes, and it is the *feeling of the bodily changes* which constitutes the emotion. The bear, whether as cause or object of the emotion, is therefore not constitutive of the emotion experience.

There was a reaction against this overly subjective view of emotion from both pragmatists such as Dewey (1895) and phenomenologists such as Sartre (1939/1962) and Merleau-Ponty (1945/1962). In the rest of this section I shall briefly outline these objections as they have influenced the account of world-focused emotion experience that is to be presented in this article.

John Dewey's (1895) aim in his theory of emotion was to modify Darwin and James's views of emotion: he thought that emotions are neither "expressions" (which he argued only exist in the eye of the beholder) and nor are they to be equated simply with experienced bodily feedback. Dewey's (1895) view was that an emotion is a purposive mode of behaviour, an action tendency, and not just a feeling: "anger means a tendency to explode in a sudden attack, not a mere state of feeling" (p. 17). This action tendency always has an object. He held that all emotion experiences are directed at an object (and that without an object an emotion is a mere "spasm" [p. 17]). Emotions are derived from instrumental actions like running away and fighting but what makes emotions distinct from mere instrumental actions is that they are (partially) inhibited actions—they have "become reduced to tendencies to action, to attitudes" (p. 32). It is the conflict or struggle between action and inhibition that characterizes emotion.

Interestingly Dewey also argued that the emotional reaction of the subject and the object of emotion were not really separate but were conjoined as a single process – a "single pulse of emotion" (p. 17). When we are frightened of a bear, wrote Dewey, the actual bear that causes the fear is not the object of the emotion experience: the particular object of the

emotion "is an abstraction from the activity just as much as is the 'feel'" (p. 20). The object

of the emotion experience is "that terrible bear" but this is part of a single process: the "whole

activity which may be described equally well as that terrible 'bear', or 'Oh how frightened I

am'" (p. 20). This view is very close to the view of Lambie & Marcel (2002) that a single

"action attitude" (emotion state) has both world and self-specifications that are reciprocal

(e.g. "me [escape from] bear") and that attention can be focused on either side of this

reciprocal attitude. Indeed, Dewey remarks that it is "bear-as-thing-to-be-run-from" (p. 22)

that is actually the object of the emotion experience.

Sartre's (1939/1962) view of emotion shares some features with Dewey's – there is a

common focus on intentionality and on the phenomenological object of the emotion. Sartre

also argues that emotional action is not identical with instrumental action, but he has a

different take on what this difference is. For Sartre, unlike Dewey, it is not inhibition which is

key to this difference, but rather how emotion acts to "transform" the world.

There are two key features in Sartre's account which are relevant for our topic of

world-focused emotion experience. The first is the notion of non-reflective emotion

experience, and the second is the notion of the "transformation of the world". In both of these

areas, Sartre is clearly influenced by Kurt Lewin (whom he explicitly refers to) but he has his

own original take on the phenomena. To take non-reflective emotion experience first, Sartre

points out that to have a conscious emotion experience (for example anger experience) is not

the same as being conscious of an emotion (being conscious *of* anger). When I am angry with

you I may be aware of *how annoying you are*, not of *how angry I am*. To take one of Sartre's

examples, to feel revulsion at the sight of a particular person is to be absorbed with the

detestable qualities of that individual. It is a direct engagement with the world, with how that

person appears to you. It is not be conscious of "revulsion": that is a later reflective state, one

which we may never engage in, if we move quickly on or have no reason or desire to reflect

on our experience. Likewise, to feel despair is not to be conscious of "despair", but to experience a world in which all possibilities seems barred to me (this last example is very Lewinian; see section 4). As Hatzimoysis (2009) summarizes Sartre's view "for an experience to be conscious it need not take itself as its intentional object" (p. 226).

The second of Sartre's insights which is of relevance here is that of how the world is "transformed" in emotion experience. Sartre writes of a "magical" transformation, by which he simply means that instead of changing the world in "practical" or instrumental ways, an emotion changes *perception of reality* such that the agent is responding to a transformed world. Imagine you see a bear and this leads to fear and then you decide that the best course of action is to run away. This is not an analysis of emotional response but of prudential action, according to Sartre. As Hatzimoysis (2009) writes:

> Running out of prudence is acting according to a plan; emotional fleeing, on the other hand, is a 'magical behaviour which negates the dangerous object with one's whole body, by reversing the vectorial structure of the space we live in and suddenly creating a potential direction on the other side' (STE 43). It is not a case of reaching for shelter (as in prudential behaviour) but of 'forgetting' or 'negating' the threat. The dangerous object is the focal point of fear, and – contrary to the case of prudential action – the faster one runs (the louder one shouts, the further one withdraws) the more afraid (or angry, or sad) one feels.

This is a highly original analysis of emotion experience which has not fully been taken on board by emotion theory. Although the claim may be too strong if taken to imply that *all* emotion response is "magical" rather than adaptive, it has clear relevance for certain paradoxes in clinical psychology in which phenomena such as self-harm or severe self-criticism seem objectively maladaptive (e.g. you already feel bad so your solution is to attack

yourself even more) yet phenomenologically are experienced as functional in some way (see Gilbert & Procter, 2006).

For Merleau-Ponty (1945/1962) emotions are constituted by actions in the world over time (Krueger, 2012). Again, emotions are not "inner feelings", as in the approaches of James (1890) or Russell (2003) but instead are styles of "being in the world": dynamic engagements of a bodily agent interacting with the world:

> I perceive the grief or anger of the other in his conduct, in his face or his hands, without recourse to any "inner" experience of suffering or anger, and because grief and anger are variations of belonging to the world, undivided between the body and consciousness, and equally applicable to the other person's conduct, visible in his phenomenal body (Merleau-Ponty, 1945/1962, p. 356).

4. Gestalt Psychology and World-Focused Emotion: Lewin & Koffka

Although Dewey and Sartre brought more attention to the object of emotions, it was the work of the Gestalt psychologists Lewin (1926) and Koffka (1935) that really fleshed out a conceptual scheme that could explain why emotional objects are experienced in the particular way they are. In fact, Lewin's work was an influence on Sartre's account of emotion. Sadly, modern emotion theory has largely neglected the insights of Lewin and Koffka, and this section will probe these insights in some detail, before we introduce an updated model based in part on these insights in section 5. The Gestalt psychologists were the first to introduce a conceptual grounding to the notion of WFEE, and the key concepts they used were physiognomic character, demand character, and hodological space.

4.1. Physiognomic Character

Koffka (1935) uses the term "physiognomic character" (originally coined by Werner in 1932) to refer to the emotional characteristics of objects. The term "physiognomy" refers to reading

character from faces, so the connotation here is that objects *express* emotional character –

they can look proud or sad, angry or menacing. Some of Koffka's examples of physiognomic

character include: the gruesomeness of a corpse, the sex appeal of a person, the formidable

look of an opponent, a friendly or an unfriendly face. Köhler (1930) also analyzed this

phenomenon and both Koffka and Köhler included inanimate examples of physiognomic

character, for example, menacing thunder, sad music, and joyful flowers. But how is this

possible? Where do these qualities come from? For Köhler, inanimate physiognomic

character derives its emotionality from dynamic similarities with human bodily emotion:

> All physical events or states which send similar constellations of stimuli to our eyes
>
> and ears, as issue from the physical body of another person, will look or sound
>
> "emotional", "restless", "directed towards something", "determined", and so forth,
>
> just as a living person does. No one can hear naively the rumbling crescendo of
>
> thunder without thus understanding it as "menacing" (Köhler, 1930; p. 203).

In fact, Koffka argued that experiencing physiognomic character is our primary default way

of experiencing the world: "the more primitive a behavioural world is, the more

physiognomic it is" (p. 660), meaning that young children will tend to experience a world full

of physiognomic character. This is illustrated by his 1924 experiments with babies:

> "the child recognizes its mother's face as early as the second month, and in the
>
> middle of the first year it reacts quite differently to a "friendly" face than it does to an
>
> "angry" face…Furthermore the difference is of a kind which obliges us to conclude
>
> that "friendly" and "angry" faces are phenomenal facts to the infant" (Koffka, 1924;
>
> p. 134).

But can physiognomic character explain WFEE? Remember a prototypical example of WFEE

would be something like this: a moment ago you seemed nice and lovely, and now I am angry

you seem horrible. So this depends on my emotion state: when I am angry, you seem hateful.

But Koffka's physiognomic characters do not necessarily depend on my state – a corpse can look gruesome whatever state I am in, and a beautiful person can still look beautiful, even if I hate them or am angry with them.

Furthermore, what exactly does "looking angry" mean? We tend to have a bias that this means "being able to be labelled as angry", but does this explain how a baby (or a chimp, or a dog) sees an angry face? There is an important distinction here that is rarely noticed or commented on by emotion researchers. This is the distinction between the *expressive* and the *demanding* properties of an emotional face. We shall have more to say about this in the next section.

4.2. Demand Character

Demand character was a notion introduced by Kurt Lewin in 1926. Writing in German, he used the term *Aufforderungscharaktere.* There are some problems with how this has been translated (see Appendix: Note on translating Lewin). In the present paper, following Koffka (1935), I have translated this as "demand character".

Lewin (1926) viewed demand character as the "impelling" quality of objects in the world. He wrote that not only can objects in the world be pleasant or unpleasant but they:

> "are not neutral towards us in our role as *acting* beings… *They challenge us to certain activities*. Good weather and certain landscapes entice one to a walk. A stairway stimulates the two-year-old to climb it and jump down; doors, to open and close them; small crumbs, to pick them up; dogs, to pet them; building stones, to play with them; the chocolate and a piece of cake want to be eaten." (Lewin, 1926/1999; p. 95, emphases in the original).[1]

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[1] The citation of Lewin (1926/1999) refers to the translation by D. Rapaport. In all quotations from this I have changed "valence" to "demand character" (see explanation in Appendix: Note on translating Lewin).

Crucially, demand character, for Lewin, depends on the current need state of the actor, and is reciprocal with need – the stairway will not entice the two-year-old to jump if she is tired; the chocolate will not look "to-be-eaten" if I am full. We can see here straightaway some differences between the idea of physiognomic and demand character. If physiognomic character is what the object *expresses*, demand character is what the object *compels*. For example, look at the face in Figure 1.

Figure 1. Is this face angry or scary? What it expresses and what it compels are different: Physiognomic versus demand character [Image from Amsterdam dynamic facial expressions set].

What the faces expresses is anger, and in Ekman-style experiments (Ekman, 1994) that is what you would be expected to say if you were asked what the person is feeling. But what the face compels in the viewer is different – it is "scariness" or "to-be-avoidedness". Is this what the infants in Koffka's (1924) study experienced when their mother made an angry face (see above)? That this is likely to be the case is suggested by a classic study by Haviland and Lelwica (1987).

Haviland and Lelwica (1987) looked at how 10 week old infants responded to the emotional expressions of their mothers. Each mother displayed facial and vocal expressions of 3 emotions – joy, sadness, and anger – in 15 second bursts and their babies' responses were

coded. Haviland and Lelwica expected that there would be some facial matching by the infants on the assumption that "repeated presentations of an emotion should induce a similar affective state" (p. 98). In so doing they were explicitly following Tomkins' (1962) claim that "All affects…are specific activators of themselves—the principle of contagion" (cited in Haviland & Lelwica, pp. 97-8). They also noted that this would not be simple imitation, but rather matching via induced state.

The results were interesting. The babies did show significant matching of their mother's joy faces, but not of their sadness faces (although mothers' sadness faces led to a significant increase in the infants showing a "mouthing" response[2]). The response to anger faces was interesting: some babies did show matching, but a full third of the sample "were unable to complete this condition because the anger display induced intense crying in them" (p. 100). These infants were then excluded from the subsequent analysis.

But, it seems sensible to conclude that these infants were responding to the demand character of the angry faces, not their expressive character. The demand character of an angry face is that it is *scary* or *threatening*, not that it is "angry". Tomkins (1962) was wrong to assume that all emotions are activators of themselves in others. While this may be often the case for a joyful smiling face (smiles begetting smiles), it is not necessarily true of other emotions such as anger, pride, or sadness. For example, an angry expression may make you frightened rather than angry, an expression of pride from an opponent may lead you to feel annoyance rather than pride, and an expression of sadness may lead you to feel compassion rather than sadness.

What Haviland and Lelwicka (1987) found, but did not notice, was a flaw in one of the assumptions of the Tomkins/Ekman tradition of research into emotional "expressions". In

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[2] Haviland and Lelwicka (1987, p. 103) write that mouthing "consisted of mouth manipulations including lip and tongue sucking and pushing the lips in and out. This behavior did not occur frequently under the other conditions. The infants' mouthing behaviors in response to the sad expressions could be seen as self-soothing". This is another example of a perceived face compelling an action (in this case soothing).

this tradition participants are asked to read other people's emotional expressions. But other people's emotions do not only have expressive (physiognomic) character, they also have demand character. Often an angry face is "scary" before (or rather than) "angry". Certainly, for a young infant it seems plausible that an angry face is experienced as scary – meaning a thing to be avoided – before it is seen in a "theory of mind" sense as an expression of another's state.

This distinction is almost never mentioned in research inspired by Ekman's influential facial expression paradigm. Another way to understand the distinction is that the demand characters depend on the need state of the subject but expressive (physiognomic) characters do not. As Koffka writes: "The attractiveness of an eatable object would have to be called a demand character, inasmuch as it disappears in states of satiety, and a physiognomic character inasmuch as it depends on the properties of the food object itself" (Koffka, 1935, p. 363)

Importantly Lewin (1926/1999) argued that demand character was not simply a binary concept of attraction vs repulsion (or positive vs negative):

> We distinguish positive and negative demand characters, according to whether we are attracted by something… or repelled by it…It would be, however, *a mistake to assume that this is the crucial feature of demand characters*. It is more characteristic for demand characters that they press toward definite actions, the range of which may be narrow or broad…The book entices reading, the cake to eating, the ocean to swimming... (Lewin, 1926/1999, p. 95, emphasis added).

So, there are as many demand characters as there are actions that humans can perform. This point makes the subsequent translation of demand characters into simple positive or negative "valences" extremely problematic. (See Appendix: Note on translating Lewin.)

Lewin also emphasized that "A man's world changes fundamentally when his fundamental goals of will change" (1926/1999, p. 96). When your goals change "Familiar

things may then suddenly acquire a new look" (p. 96)[3]. This is because the demand character of the world changes when your goals change. Dramatic examples are provided in Lewin's (1917/2009) essay, the Landscape of War, written when he was an infantryman in the First World War. Before the war a particular landscape was "round, without front or behind", but when at war exactly the same landscape was experienced differently: "the expansion into infinity no longer applies unconditionally. The area seems to come to an end somewhere in the direction of the Front; the landscape is bounded" (Lewin, 1917/2009, p. 201). Or, when an area is no longer a combat zone, "The character of danger has been abolished...Where a shallow depression [previously] struck one as good cover, one now only sees level, if gently undulating land without any actual height differences" (p. 208). Lewin (1917/2009) was at pains to emphasize that such differences were phenomenologically perceived and not just "imagined".

Demand characters become relevant for emotion when we consider both (a) the reciprocal nature of subjective need and objective demand, and (b) the fact that demands can be defined by actions to be performed. I shall expand on this in Section 5.

4.3. Hodological Space

Hodological space was another term introduced by Kurt Lewin, this time in 1938 to refer to psychological paths within a person's "life space". The life space, for Lewin, is the total situation which influences a person's behavior and consists of the person and their environment in interaction with each other (Lewin, 1936). So, behaviour is not a function of the environment as the behaviourists argued (see Watson, 1924; Skinner, 1953) but a function

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[3] In the novel The Thirteenth Tale (Setterfield, 2006), Hester starts to fall in love with the doctor but doesn't realize this. She discovers it only *after* she notices that he now looks different: "Then the most unexpected thing happened. The doctor's face changed. Yes, changed, before my very eyes. It was one of those moments when a face comes suddenly into new focus, when the features, all recognizably as they were before, are prone to a dizzying shift and present themselves in an unexpected new light". Because of this she realizes she loves him. This illustrates Lewin's point that experiencing a changed world can give one knowledge about oneself.

of person plus environment, which Lewin would often write as B = f [P,E] . In order to characterize this we need, in addition to the demand character of objects or situations, the concept of forces which act upon people, with a strength and a direction. These forces are vectors which create paths in a path space, a "hodological space".

For Lewin, the whole state of the person and environment taken together [P,E] is the "psychological field" or "life space". One way to think about this is as follows: the life space is *the environment as imbued with one's personal tendencies, attributes, and knowledge*. For example, let's consider a mundane case. I am in town and I feel hungry. It is not that hunger in me simply triggers food seeking behaviour [P→B], or indeed the other way round that I see a restaurant and that makes me salivate [E→B]. Instead, the whole psychological situation, or the life space [P,E] is like this: whereas before I was hungry the town for me was a series of shops and people more or less indifferently spaced and of varying degrees of interest, now I see only possibilities for food—I see a path to that now very attractive pizza stand. "It is as though a groove had formed in a plane surface and you were being forced down that groove" to use a phrase from Koffka (1935, p. 43). The groove or path is part of my current "life space" [P,E] and it is *this* that determines my behaviour.

Now let's consider how the notion of the life space determining behaviour can be applied to *emotion*. When I am very angry, you suddenly become "someone to-be-attacked". When I am anxious about the exam, I now see the previously mundane corridor in which the exam room sits as leading to my doom: I don't want to go down that corridor, and the nearer I get to the exam room the more I want to go the other way. The corridor now has negative valence or "to-be-avoided" demand character.

In order to represent direction in the life space, Lewin introduced the notion of hodological space, from the Greek "hodos", meaning path. Hodological space is "an empirical space which is not identical with the physical one" (Lewin, 1938, p. 1). He writes

that "the purpose of hodological space is to find a type of geometry which permits the use of direction in a manner which will correspond essentially to the meaning that direction has in psychology" (p. 23). There are two keys ways in which hodological space differs from Euclidean space. First, because hodological space is divided into subregions (e.g. "home", "work", "safe places", "dangerous places", etc.), the shortest distance between two points in hodological space is not necessarily a straight line between them as in Euclidean space. The shortest or best path to school in hodological space may be the path that avoids the scary street, even though that street would be the shortest route in Euclidean space (see Figure 4, top). And second, hodological space distinguishes direction toward and direction away from. Paths to or away from situations or objects are experienced as "welcoming" or "attractive" or "easy" versus "unwelcoming" or "repelling" or "difficult/ blocked" (see Lambie & Marcel, 2002).

An emotional example from Lewin (1935) is that of hopelessness. Sometimes we are in situations in which all areas of the life space seem to have negative demand character (see Figure 2).
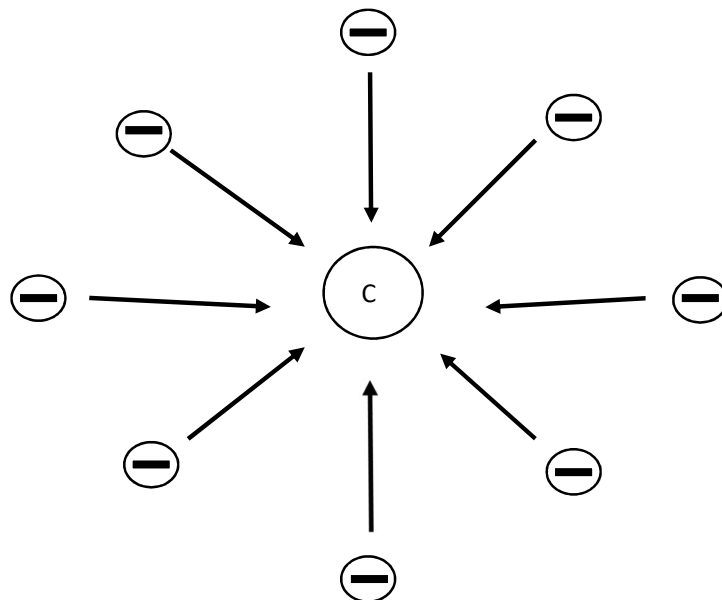
Figure 2. Hopelessness (hodological space of).

All areas of experienced path space have negative demand character for child C. The arrows are all

away from each aspect of the world, showing that nothing is attractive and there are no possibilities

for action in the world. [After Lewin, 1935, p. 95.]

Lewin (1935) accompanied Figure 2 with a photograph of a very small child who

seems to have physically crumpled: rolled into a ball, with his head almost between its legs

and his arms covering his head. He writes: "The child, despairing, contracts, physically and

psychically, under the vectors coming from all sides" (1935, p. 94). Alternatively, the child in

this situation may have an emotional outburst, or a "flight to unreality", i.e. try to escape in

imagination, or in severe instances, escape through self-destruction. Consider this example

from Lewin:

> "If the barrier is very firm, there is no way out for the child… As a result of her
>
> parents' strictness, Martha, ten years of age, lived in constant terror of poor grades at
>
> school… It was so strong that the child often cried out in her sleep, ran to her
>
> mother's bed, and wanted to stay with her because she was afraid. Her parents treated
>
> Martha very sternly. Once the mother threatened, "If you are not promoted you need
>
> not come back home!". After this utterance the child entertained thoughts of suicide."
>
> (Lewin, 1935; p. 140).

What this example illustrates is that the world-focused emotion experience of one's life

situation is often of immense importance and can be utterly constraining on an individual,

sometimes even more so than one's "intense feelings" (e.g. feeling sick to one's stomach).

But, psychology and therapy often pays more attention to feelings and symptoms than to

one's emotional life situation or hodological space.

Lambie and Marcel (2002) applied the notion of hodological space to emotion

experience, and gave some characterizations relevant to different emotions (see Table 2).

Table 2

Examples of hodological space for different emotions (from Lambie & Marcel, 2002)

Emotion	Hodological Space
Joy	Open, inviting, welcoming, nonresistant, supportive
Sadness	Empty, closed, burdening, lacking in attractiveness
Anger	Impeding, blocking, requiring force to remove blocking agent
Fear	Overwhelming, piercing, disintegrative, to be moved away from
Shame	The impinging gaze of others
Pride	The welcoming gaze of others

4.4. Gerundival Perception

Gerundival perception was a term introduced by Lambie & Marcel (2002) and was defined as the world-focused counterpart to an action urge. In grammar a gerundive is a form of verb that functions as an adjective and means "that should or must or is appropriate to be done". For example, in Latin, the gerundive form for the verb amare (to love) is amandus (e.g. "amandus est" – he must be loved). In English there is no gerundival form of verbs as such, but you can say "he is to be loved", or "that is a book to be read".

However, because emotions are relational phenomena, that is, not properties of the agent alone but of the agent in relation to its environment (Frijda, 1986), then an action readiness urge such as feeling ready to attack, or feeling ready to flee, should have a world-focused counterpart: something is experienced as to be attacked; or something is experienced as to be fleed from. This latter phenomenon is called gerundival perception. Lambie & Marcel (2002) write that one aspect of WFEE is "of a figural object with a phenomenological

property of impellingness that is the world counterpart of a self-focused action urge. This property we call "gerundival" " (p. 239). Gerundival perceptions were anticipated by William James who wrote "To the broody hen... a nestful of eggs... [is a] never-to-be-too-much-sat-upon object" (1890; vol 2, p. 387).

Gerundival perceptions are similar to demand characters, and are a subset of them, but they are explicitly tied to emotion and are used as a technical term for the world-focused aspect of an emotional action urge. Examples of action urges and their gerundival counterparts are shown in Table 3.

Table 3. *Examples of felt action urges and reciprocal gerundival perceptions (from Lambie & Marcel, 2002).*

Emotion	Felt action urge (self-focused)	Gerundival perception (world-focused)
Anger	My urge to attack (X)	X to-be-attacked (by me)
Fear	My urge to escape from (X)	X to-be-escaped from (by me)
Joy	My urge to interact with (the world)	World to-be-interacted-with (by me)
Sadness	My urge to withdraw from interaction (with the world)	World not-to-be-interacted-with (by me)
Shame	My urge to hide myself away (from others)	Others' gaze to-be-avoided (by me)
Pride	My urge to display myself (to others)	Others to-be-displayed-to (by me)

5. A New Model of Emotional Demand Character

The analysis of the concepts in section 4 suggests a synthesis of demand character, hodological space, and gerundival perception in explaining WFEE. It also suggests an important distinction between physiognomic and demand character, with only the latter constitutive of emotion experience. Let us call the new synthesis, the "emotional demand model" of emotion experience.

The Emotional Demand Model, then, states that the phenomenology of WFEE consists of gerundival perceptions within a hodological space. In other words, in world-focused emotion you experience a world of paths or obstacles (hodological space) containing objects as demanding certain actions to be done (gerundival perception). Taken together, gerundival perceptions within a hodological space are collectively known as the "emotional demand character" of the experienced world.

Within a functional or cognitive psychology framework, the processes underlying such experiences are as follows. The environment is constantly being scanned in relation to one's concerns (Frijda, 1986), and when an event is appraised as relevant to a concern (for example, that the lion over there is dangerous), emotions arise which are "action attitudes" (Lambie & Marcel, 2002). The process of attending to the world aspect of this attitudinal state yields gerundival perception of the lion-to-be-fleed-from. (Self-focused attention to this state yields a different kind of emotion experience – a feeling of my body being ready to run. Consider the example given in section 2 of pressing one's finger against the table: the same sensory information can yield pressure feeling in my finger or perceptual description of the hardness of table). The appraisal process itself (although it may often be brief and nonconscious) also affects emotion experience. For example, let's say the situation has been assessed in terms of the lion being dangerous relative to my coping resources. This appraisal shapes the hodological experience – for example, "grooves", "avenues of escape", "barriers"

etc. are thereby seen in the phenomenal field as part of the emotion experience. See Figure 3
for a summary of the Emotional Demand Model of WFEE, in terms of both phenomenology
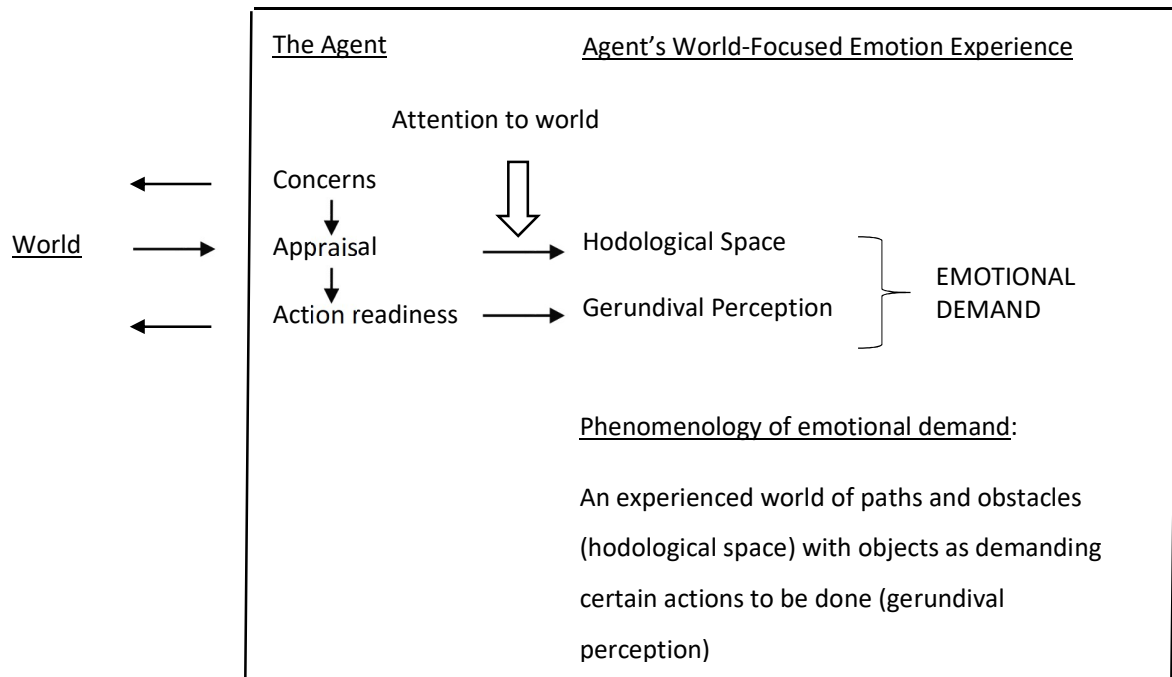and underlying processes.

Figure 3. The Emotional Demand Model of World-Focused Emotion Experience.

The phenomenology of emotional demand can be described in terms of two things:
conation and value. As a result of evolution, emotions are conative (they involve striving) and
the world of emotion (the world in an emotional light) is a world of high value. These two
facts – striving and value – are connected phenomenologically in the experience of *emotional
demand*. Emotional demand character means that the emotional world is not simply a world
of high value – appealing or unappealing, good or bad – but rather is a world perceived as
compelling you to do things. Emotional demand characters are the impelling (demanding)
properties of the world which exist because of one's emotional state (i.e. the underlying

action attitude). These include things like: the unbearable disarray of untidy books that must be realigned (because of my state of anxiety); the beautiful face that must be kissed (because of my love, or my sexual desire); the person who must be denigrated (because of my anger); the path through life that seems impossible (because of my hopelessness).

Hodological space is experienced path space and it is important to note that (a) it can exist without emotion, but also (b) that it is heavily transformed by emotion and can be created by it. In terms of existing independently of emotion, many paths and obstacles in life are ecologically and socially real. Powerless people in a society (children, slaves, victims of racial or sexual discrimination) really do have life paths blocked. On the other hand, a powerful and wealthy individual may, *due to depression* for example, also experience a lack of options in hodological space. But the "socially real" and "emotional overlay" aspects of hodological space interact with each other—existing grooves and blockages in one's hodological space are modified by one's emotion state.

For example, there is a good reason why individuals with borderline personality disorder have a tendency to experience others as "untrustworthy" (Beck, Freeman, & Davis, 2004), in line with abuse and trauma in early childhood (Nicol, Pope, Sprengelmeyer, Young & Hall, 2013). But this is also heightened by emotion—with anxiety and resentment increasing the emotional demand of untrustworthiness (Fonagy, Luyten & Allison, 2015). In later life the emotional demand character of untrustworthiness may be maintained more by the emotions of anxiety and resentment than by what is "socially real". In other words, the individual comes to experience everyone as untrustworthy, as a function of, but also as a constitutive part of, their anxiety.

In everyday cases, how one experiences emotional demand in the world is influenced by one's activated concerns and subsequent emotion state. For example, Figure 4 illustrates a world-focused experience of fear (top) and affection (bottom). In this case the hodological

space and the demand character is an "overlay" in that the same scene is transformed: in the one case I am concerned about my safety at night and am fearful of (and want to be avoid) the figure in the dark street; in the other, I am out looking for my lost son, and I am drawn to the figure looks like it might be him.
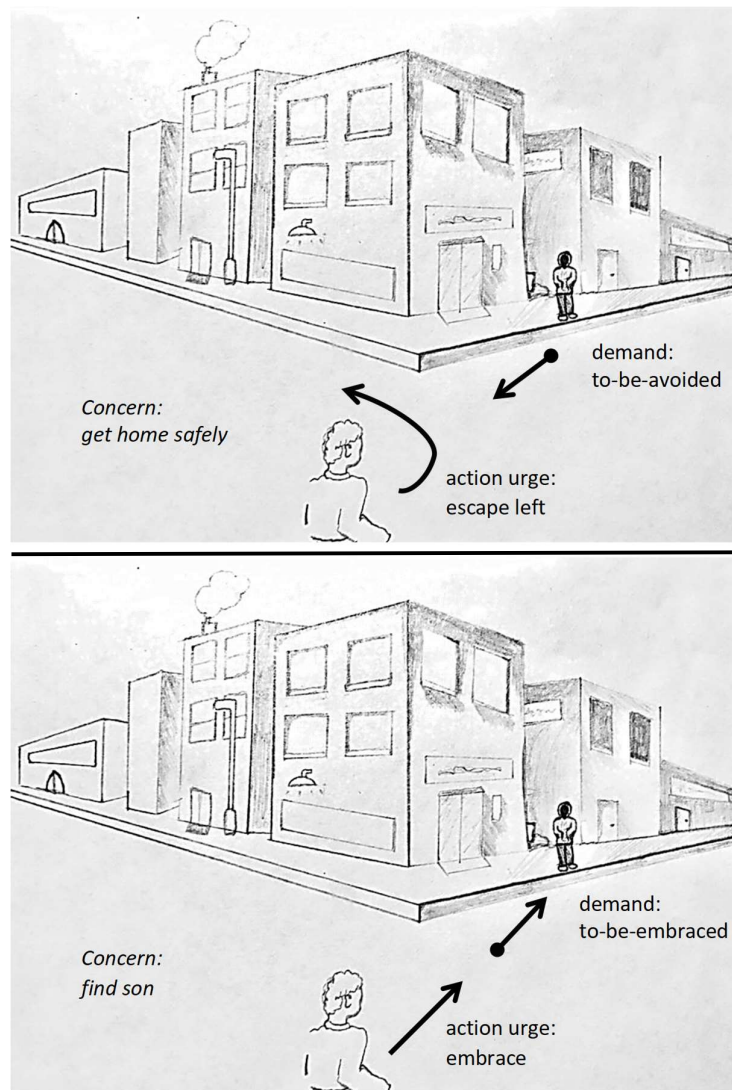
Figure 4. Emotional demand in hodological (path) space.

Emotions can be experienced as a world of paths and obstacles containing objects that demand certain actions be taken. The nature of the demand *away from* (top) or *towards* (bottom) objects depends on one's activated concern and related emotion state. [Picture: Ella Stavrou].

Prototypical kinds of emotional demand for different emotions are illustrated in Figure 5. The emotional demand diagrams can be summarized as follows[4]. *Joy* is an experience of a world to be interacted with, with a certain urgency, with an overflow of activation which can be attached to different objects (think of the footballer who has scored a goal who runs, jumps, hugs different people around him). The direction of joy is not necessarily focused on one object but can be the world in general with a full 360 degree orientation. *Fear* is movement away from a specific object or situation, with an urge to avoid and a perception of an object or situation to be strongly avoided. *Anger* is movement towards a specific object with an urge to attack and an experience of an object to be attacked. *Sadness*, in hodological (path) terms, is an experience of absence of object and an incapacity of action or loss of activation. *Love* or *affection* is an experience of an object to be cared for ("never-too-much-to-be-hugged"), with an urge to move towards and embrace.

More complex emotions can also be accounted for on this model. For example, envy involves experiencing an object (or life situation) of another as to-be-appropriated or to-be-possessed; shame involves experiencing others' gaze as to-be-avoided; pride as experiencing others' to-be-displayed-to; and jealousy (of the sexual kind) involves two others, one experienced as to-be-controlled or to-be-possessed, and another as to-be-attacked or to-be-driven-away. Since emotions are not static but are in constant flux, it is to be assumed that the emotional demand characters of objects can change over time in the course of emotional interactions. For example, a person in an intense argument with a romantic partner may experience them shifting from "to-be-cared for", to "to-be-attacked", to "to-be-avoided", back to "to-be-cared for" over the course of several minutes as their affective quality shifts

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[4] These descriptions share some similarities with Frijda's (1986) account, but he focuses on the action readiness component, and not on the gerundival aspect.

according to the interactive dance between the micro emotional states of the perceiver and the

perceived demands of the other (cf. Withagen, 2018, p. 25).
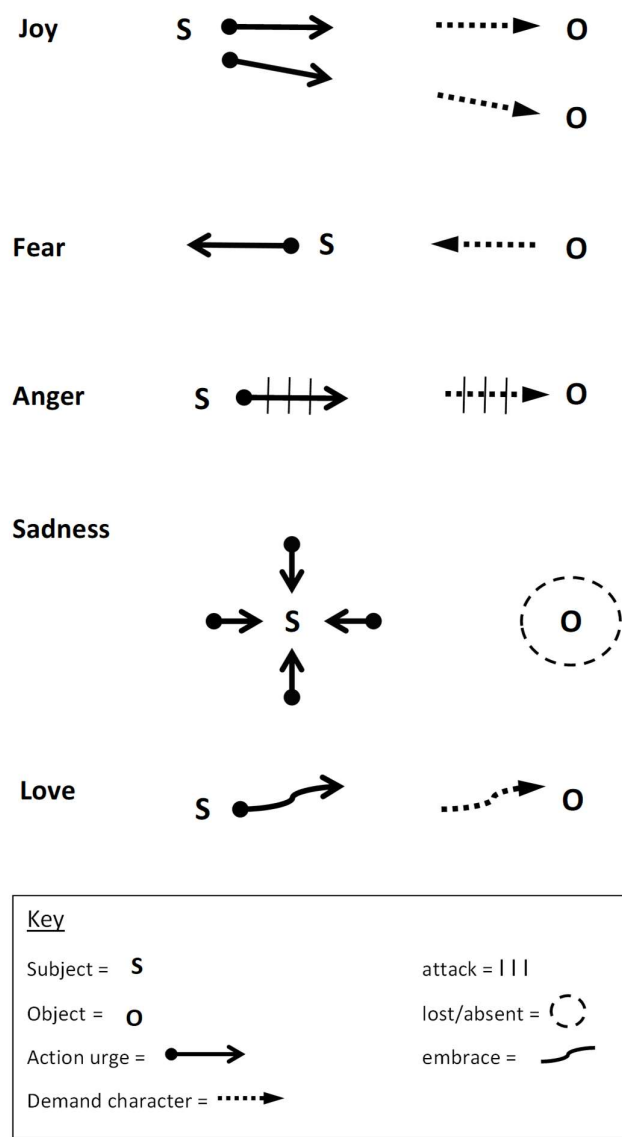
[SEE NEXT PAGE]

Figure 5. Emotional demand illustrated for five emotions.

Shows reciprocal action urges (self) and demand characters (world). For example, anger is an experience of an object to-be-attacked, and a reciprocal urge to attack.

5.1. Relation of the emotional demand model to other recent ecological accounts of emotion

The model shares some similarities and differences with the recent "extended emotions" approach (see Krueger & Szanto, 2016). According to this view, emotions involve the world because "some emotions incorporate external resources and thus extend beyond the neurophysiological confines of organisms" (Krueger & Szanto, 2016, p. 863). One example of this given by Krueger and Szanto is a musician playing an instrument whereby the "physical qualities of the instrument and the auditory properties of the produced sound…regulate[s] the dynamics of their experience in real time" (p. 867). Another example is the emotional interaction between a parent and an infant, whereby the infant relies on input from the parent to regulate their emotion, input such as smiling, caressing, diverting attention, etc. This can create "mutual affect" in which emotional states are shared between the infant and the caregiver. It has also been argued that some social practices create "affective niches", which are "instances of organism-environment couplings…that enable the realization of specific affective states" (Colombetti & Krueger, 2015, p. 1160), for example, wearing brightly coloured clothes on rainy days, or listening to a particular playlist on a portable music device, to regulate one's mood.

How does the extended emotions thesis relate to the emotional demand model? One difference is that the emotional demand model is concerned with the *transformed* appearance of the world in emotion (cf. Sartre, 1939/1962) and the actions relevant to that transformation, rather than with the more pragmatic or instrumental actions that may underlie an affective niche. For example, wearing brightly coloured clothes to affect one's mood is a more instrumental connection to the world than the "magical" transformation of someone from "to-be-cared for" to "to-be-attacked".

On the other hand, one criticism that has been levelled at the extended emotions thesis can be defended by the emotional demand model. Griffiths and Scarantino (2009) argue that the extended emotions thesis "potentially confuses the claim that the environment makes a causal contribution to a mental processes with the more ontologically demanding claim that it is a constituent part of it" (p. 448). But the extended emotions thesis requires a special kind of coupling between emotion and environment that counts as the environment being constitutive of the emotion (Krueger & Szanto, 2016).

The emotional demand model specifies a coupling of this sort. According to the emotional demand model, a certain kind of experienced world is constitutive of emotion, and is sufficient for an instance of that emotion to exist. For example, to experience a world barren of possibilities is sufficient for the experience of despair (it *is* despair), or to experience a spider as "never-too-much-to-be-avoided" is sufficient to experience fear. Insofar as the world is constitutive of emotion in an extended emotions approach, then the emotional demand model is one version of an extended emotions account. The demanding or gerundival world exists as part of emotion experience and in this sense an emotion extends beyond the head or body.

How does the emotional demand model relate to Gibsonian accounts of emotion? Gibson's (1986) notion of "affordances" was influenced by Lewin's idea of demand character (which Gibson thought was too subjectivist), but Gibson wanted to strip the idea of its dependence on individual motivation. His notion of "affordances" was thus defined on in terms of action "possibilities" rather than actions as "demanded" by the environment. Thus for Gibson, affordances "are not properties of the phenomenological world that depend on the state of the observer; rather, they are ecological phenomena that exist in the environment" (Withagen et al 2012, p. 251). As Gibson (1982) wrote: "The perception of what something affords should not be confused with the "coloring" of experience by needs or motives. Tastes

and preferences fluctuate. Something that looks good today may look bad tomorrow but what it actually *offers* the observer will stay the same" (cited in Withagen et al 2012, p. 251). Recently Withagen, 2018, has put forward a more nuanced account of this – see below.

However, if affordances do not change according to the needs and motives of the organism then they are not a good candidate for explaining WFEE. For it is precisely the fact that demand characteristics change according to emotion – that someone is to-be-hugged when I love them and to-be-attacked when I hate them – that is what needs to be explained. As standing apes with arms that are not needed for locomotion, our ecological situation is such that other members of our species afford many different actions such as embracing, hitting, stroking, etc. But it is precisely when these different actions seem to be *compelled or demanded* by our experience of others that needs to be explained by the student of emotion experience: why does someone afford hugging at one time and afford hitting at another? It is indeed the colouring of the world by needs and motives that is relevant for emotion experience. That is why Lewin's notion of demand character is superior to Gibson's notion of affordance in characterizing WFEE.

More recently, Withagen (2018) has put forward an ecological account of emotion that does indeed take into account variations in affordances depending on characteristics of the individual. Rather than defining affordances as "mere possibilities for action that exist independently of the animal's experiences" (p. 22), Withagen provides a "user-based account of information". On this account, information from the world is not simply "picked up" from the ambient array but rather what is picked up depends on characteristics of the perceiver, such as their developmental history.

"The pattern in the optic array may be the result of laws of optics and the physical structure of the environment, but what the detection of the pattern does is a *joint*

product of the pattern and the developmental history of the person who is affected by it" (p. 25).

For example, two people may react differently to a critical remark from their boss, depending on their different developmental history. Relating this to Dewey's theory, he says that "there is no mediating process of appraising between the perception of the environment and the elicitation of the emotion. Rather the "stimulus" has an affective quality" (p. 25).

Withagen's (2018) approach is consistent with the emotional demand model. Where it differs is in the specification of what the perceiver brings to the experience. The emotional demand model gives a detailed specification of different kinds of action readiness/gerundival perception couplings typical of different emotions, whereas Withagen focuses more on individual differences in developmental history. These are perhaps superficial differences as both models can account for changes in world perception as a result of the state of the organism.

6. Implications and Conclusions

The emotional demand character model of WFEE has potential benefits for several different areas of psychological theory, including autism, theory of mind, and emotion regulation.

6.1. Implications for autism and theory of mind—distinguishing expressions and demands

The Emotional Demand Model makes clear a hitherto neglected distinction between the expressive and demanding qualities of emotional objects (see Figure 1). This explains both everyday phenomena of how we react to emotional objects such as facial expressions and stressful situations, and also may account for certain puzzling phenomena in atypical development.

For example, consider the findings that children with autism often have difficulties understanding what negative emotion faces express (Hobson, 1986; Uljarevic & Hamilton,

2013) but nevertheless can find them distressing (Smith, 2009; Matsuda, Minagawa & Yamamo, 2015). The conjunction of these two findings is puzzling from both "mind-reading" accounts and empathic contagion accounts of how people respond to the emotional states of others. On mind-reading (theory of mind) accounts, people confronted by another's emotional expression will try to infer the other person's mental state and respond to that, but this is something that people with autism seem to have difficulties with, so what makes them respond to emotional faces? Perhaps they respond via empathic contagion, i.e. a process by which another person's emotion state induces a similar emotion state in oneself (Tomkins, 1962). But this account cannot work because an angry face often makes the receiver distressed or fearful, rather than angry; and this is true of both individuals with autism (Smith, 2009) and typically developing individuals (Haviland & Lelwicka, 1987).

The Emotion Demand Model can solve this problem. It holds that demand characters and expressions (physiognomic characters) are different and therefore can be processed differently. Someone could experience the demand character of a face – i.e. they directly experience the face as "scary" or "to be avoided", even without any current expressive knowledge that the face represents a state of "anger" in the person.[5] Indeed the finding that even simple eye-contact may be more threatening to people with autism (Dalton et al, 2005) shows that eye-contact may possess more demand character rather than expressive character for them, and this is backed up by their difficulties with the Reading the Mind in the Eyes Test (Golan & Baron-Cohen, 2006). Some of the difficulties associated with autism may be difficulties in understanding the *expressive* qualities of emotions, not their *demanding*

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[5] Note, in using the term "expression" I am not implying that the expression is separate from the emotion and is merely "expressive" of it. The anger face is part of the emotion of the person whose face it is (cf. Koffka, 1935; Merleau-Ponty, 1945/1962). But in calling this "anger" the perceiver is attending to the physiognomic properties of the emotion; in calling it or seeing it as "scary" the perceiver is attending instead to the demand properties of the emotion. In both cases the perceived properties are part of the emotion of the person being looked at, and not merely symptoms of it.

qualities, and the above findings empirically illustrate the distinction between the two qualities.

Of course, the Emotional Demand Model is not limited to explaining the experience of people with autism. All situations are potentially demanding in some way for all living things (as Karl Popper, 1999, wrote, "all life is problem solving"). In terms of phenomenal experience, all conscious humans (and other conscious animals) will experience the demanding properties of their situation, and when they are in an emotion state these demanding properties are heightened in specific ways (i.e. leading to specific gerundival perceptions, such as experiencing something that must be avoided, or something that must be embraced, etc.).

This model can also explain monkeys' and apes' fearful responses to angry faces (Köhler, 1930). Monkeys will often respond fearfully to an open-mouthed anger face (Hadj-Bousiane et al, 2008), in other words without showing contagion. This is also most parsimoniously explained as neither empathy nor activation of theory of mind, but simply as WFEE in the form of experiencing emotional demand character.

It is not just anger faces that have this quality – all emotional expressions have demand character. Consider the demand character of a sad face, and of expressions of sadness in general. Often an expression of sadness compels compassion in the viewer. The person is seen as "to-be-looked after". In other words sadness demands or impels concern or caring behaviour. For example, in studies with preschool children, when an experimenter pretends to be sad or hurt, two year old children will typically will show comforting behaviour towards them (Zahn-Waxler et al. 1992), and even some preschoolers with ASD will do so (Yirmiya et al, 1992).

6.2. Implications for emotion regulation

The Emotional Demand Model emphasizes that emotions are very compelling (see also Frijda, Ridderinkhof, & Rietveld, 2014) and that world-focused emotion experiences are a kind of "unawareness of emotion". Both of these factors contribute to making emotion regulation difficult. First, in terms of compulsion, strong emotions are hard to inhibit and there is an impulsive quality to them. The number of knife stabs and gunshots in domestic murders, typically involving heated arguments, jealousy, and anger, is higher than in non-domestic murders (Wolfgang, 1958; see p. 164).

Second, what is meant by saying that WFEEs are a kind of unawareness of emotion? Not that WFEEs have no phenomenology – on the contrary, there is definitely "something it is like" to have a WFEE. But the person having a WFEE needs to shift attention in order to notice that their experience is part of an emotion. For example, people with anger disorders are sometimes unaware of their anger and are unable to label and own it, but nevertheless have strong feelings of "the world being against them" (Deffenbacher, 1995). Lambie & Marcel (2002) gave an account of such cases as needing a shift to self-focused attention, including attending to models of what anger is and how to spot anger in oneself. Similar processes are discussed by Linehan (1993) in relation to borderline personality disorder in which high emotionality can go hand in hand with poor awareness of emotion because the emotion is very world-directed.

But even in everyday, non-clinical cases, emotions possess this character – of being very compelling and also sometimes very world-directed. For example, the world seems flat and boring (sadness), or the speech I am to give is very threatening, and the building in which I have to give it looks ominous (anxiety).

What, then, is to be done to help with emotion regulation, according to the emotional demand character model? The first point is that being too "immersed" in a demanding world

is not conducive to emotion regulation. Lambie & Marcel (2002) distinguished between immersed and detached emotion experience, and argued that world-focused emotion experience tends to more immersed. Immersion means that you have direct engagement with the world in the manner of Sartre's "non-reflective consciousness" (see section 3). For example, you experience people around you as annoying but you do not experience this as "anger in me". In order to regulate the emotion, you need to move to a more detached mode of awareness (cf. Sartre's "reflective consciousness"), in which you can take ownership of the emotion. So, the emotional demand model would emphasize that people need to recognize that "demanding world" experiences are indeed instances of emotion. The person who denies they are angry but asserts they are "surrounded by obstructive idiots" (see Deffenbacher, 1995), needs help to recognize (a) that the experience of "being surrounded by obstructive idiots" is indeed part of anger, and that (b) trying to "detach" from the demandingness will help them to recognize and regulate the emotion (cf. both cognitive behaviour therapy, and mindfulness practice).

For example, depression can include experiences such as "I'm up against the world", "my future is bleak"; "it's just not worth it" (Williams, Teasdale, Segal & Kabat-Zinn, 2007, pp. 171-2). These seem to be true if one is immersed in the emotion. But if one is able to see them as part of an emotion experience rather than as facts about the world, one is better able to make changes which will ultimately help regulate one's mood. Williams, Teasdale, Segal & Kabat-Zinn (2007) reported a woman, Jade, who looked at a list of typical depressive thoughts, including the ones listed above, and said: "When I was in the middle of the depression I believed the thoughts 120 percent—this was how things were, no question. But now—now that I'm feeling okay most of the time—I don't often have these thoughts, and if I do they just seem to be faint echoes of how they were then" (p. 173).

"This is how things are, no question" is often a feature of WFEE, but gaining understanding of emotional demand characters may be a first step in detaching from such "phenomenological truths" which can be constraining. In Figure 2, above, there is a hodological space diagram of hopelessness. Perhaps drawing such a diagram for oneself, or in therapy, and then trying to identify an exit on the diagram would be a way both to conceptualize the emotional demand character of one's world, but also a route to freedom from it.

The Emotional Demand Model can also explain and conceptualize the effects of the natural environment on wellbeing. For example, Roe & Aspinall (2011) studied "emotional affordances" in boys with emotional problems in a forest camp setting. They found that the forest camp led to more calm and less anger than the school setting where the boys spent most of their time. Their data is fascinating but I wish here to reconceptualize it.

Here is how Roe and Aspinall framed their findings. Following Russell's (1980) model of emotions they wrote "we have conceptualized an emotional affordance in terms of what is offered for pleasure/displeasure and arousal/relaxation" (p. 536)". But the model of emotions they used is arguably ill-suited to understanding "emotion in the world". Roe and Aspinall write at times in terms of the environment being a "stimulus" that causes a "valenced reaction" in the boys. There are two problems here. Talk of "stimuli" is slightly problematic to the affordance approach as on that approach objects are not viewed as stimuli causing responses, but rather affordances are perceived in objects and then are utilized by the actor (Gibson, 1986; but see Withagen, 2018 for a different slant on this).

Second, and more importantly, on Russell's model the emotion is a self-state (e.g. I experience pleasure and activation as feelings in myself), rather than the emotion being embedded in the self-object relationship. What is needed is a model of emotion that does not view emotion simply as a self-state but which does justice to how the self and the world are

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both constitutive of an emotion. It is the latter approach which seems warranted by the forest setting data, and which arguably the Emotional Demand Model can supply.

So what would Roe and Aspinall's findings, and the emotion regulation implied by them, look like under the Emotional Demand Model? Here are some of their key findings, as summarized in their discussion, and followed by my gloss (in italics) using the Emotional Demand Model.

1. Anger was greatly reduced in the forest setting as compared to the classroom. *Fewer people and objects were perceived as "to-be-attacked" in the forest setting.*

2. The ambience of calm was higher in the forest in comparison to the classroom. *The world of the forest was to be dealt with more gently, with more ease*.

3. There were improved relationships between the boys and their peers, and with the staff. *In the forest setting, people were experienced as to-be-trusted*. (Roe and Aspinall indeed follow this interpretation, by saying there were more "affordances for trust").

4. Cooking and eating around the camp fire nurtured socialization, and there was a theme of homeliness, "reflected in the construction of dens, shelters and hammocks, offering places to retreat and be alone….places to share time with a peer, or as stimuli for imaginative home-making games". *Being in this setting created paths in the boy's hodological space leading to safety, comfort, and social interaction*.

6.3. Conclusion

World-focused emotion experience is an overlooked aspect of emotion that is best explained using the Gestalt psychology concepts of demand character and hodological space. Emotion experience involves, not just awareness of one's body or one's feelings, but also awareness of a demanding world which impels actions, and which contains paths of varying difficulty and

ease. Emotional demand character connects the idea that emotions involve both striving in oneself and value in the world. They are the world-focused counterpart of action readiness.

Understanding the idea of emotional demand character, and explaining it to people, may help individuals increase their agency while also helping them see how strong emotions make life hard as they have a tendency to "push you around". It is not a paradox to say that to realize how impelling emotions can be can help one to resist them. The less we are aware of emotions as emotions the more we are a slave to them (see Lambie, 2008). Or, to put it the other way round, the more we realize that the demanding world is sometimes constraining because of our emotional state, the more we can be free of that demand.

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Appendix: Note on translating Lewin – valence, demand character, or affordance?

Confusingly, Lewin's term *Aufforderungscharaktere* led to two influential English terms in psychology: "valence" and "affordance", neither of which actually mean what *Aufforderungscharaktere* means. That is why in this paper, I have followed Koffka (1935) in translating *Aufforderungscharaktere* as "demand character". This section gives a brief justification.

First, let us contrast the two different translations. Here is a small quotation from Lewin's original 1926 paper:

> Ja, bis zu einem gewissen Grade sind die Aussagen: "das und das Bedürfnis besteht" und "der und der Bereich von Gebilden besitzt einen Aufforderungscharakter zu den und den Handlungen", äquivalent (Lewin, 1926, p. 353).

Here is Rapaport's translation, originally from 1951 and reprinted in 1999:

> the proposition that "such-and-such a need exists" is to a certain extent equivalent to the proposition that "such-and-such a region of structures has a valence for such-and-such actions". (Lewin, 1926/1999, p. 97).

And here is Koffka's (1935) translation:

> To a certain degree the two propositions: 'this or that need exists' and 'this or that range of objects possesses a demand character for these or those actions' are equivalent. (Koffka, 1935, p. 345).

The official line was to ignore Koffka and translate *Aufforderungscharakter* as "valence". This was established by the translators of Lewin's influential 1935 book *A Dynamic Theory of Personality*. The translators D.K. Adams and K.E. Zener had a footnote the first time they used the word "valence" to translate Aufforderungscharakter. After this passage from Lewin (1935):

> Many things attract the child to eating, others to climbing, to grasping, to manipulation, to sucking, to raging at them, etc. These imperative environmental facts – we shall call them valences [*Aufforderungscharakter*] – determine the direction of the behavior (p. 77)

They write in a footnote:

> A fairly precise translation of *Aufforderungscharakter* is the term "demand value" which Tolman… uses for the same concept. In order to avoid unnecessary misunderstandings, Professor Tolman and Lewin have agreed to use the same term and at Tolman's suggestion have chosen "valence". There is no good English equivalent for *Aufforderungscharakter* as the author uses it… Perhaps the most nearly accurate translation for the expression would be "compulsive character", but that is cumbrous and a shade too strong…It should be noted that, in contrast to chemical valence, which is only positive, psychological valence…may be either positive (attracting) or negative (repelling), and that an object or activity loses or acquires valence (of either kind) in accordance with the needs of the organism. (Translators note; Lewin, 1935, p, 77n).

From then on *Aufforderungscharakter* was always translated as "valence". Indeed the OED has this as the first usage of valence in its psychological sense. But this usage led to two problems and two confusions. First, valence is *not* the same as *Aufforderungscharakter*. According to Lewin (1926/1999, p. 95) "It would be, however, a mistake to assume that this [attraction and repulsion] is the crucial feature of demand characters [*Aufforderungscharakter*]". Instead, "It is more characteristic for demand characters that they press toward definite actions, the range of which may be narrow or broad…The book entices reading, the cake to eating, the ocean to swimming" (p. 95). Lewin of course may have changed his mind by 1935, but the original concept of demand character, it is argued in the present paper, has much more explanatory power than the thin concept of valence.

Second, Gibson (1986) adapted Lewin's *Aufforderungscharakter* for his notion of affordances, but crucially he stripped any dependence on the subject's own need state from the concept (see section 2.5.). There may be very good reasons for this, but it must be kept in mind that affordances, valence, and demand character mean three very different things: affordances are environmental possibilities for action (and do not depend on need), valences are attractive or repulsive qualities of objects, and demand characters are the specific action-impelling qualities of objects, which depend reciprocally on the organism's need state.