

## Aberystwyth University

### *Pictorial and spatial metaphor in the drawings of a culturally diverse group of women with fertility problems*

El Refaie, Elisabeth; Payson, Alida; Bliesemann de Guevara, Berit; Gameiro, Sofia

*Published in:*  
Visual Communication

*DOI:*  
[10.1177/1470357218784622](https://doi.org/10.1177/1470357218784622)

*Publication date:*  
2018

*Citation for published version (APA):*

El Refaie, E., Payson, A., Bliesemann de Guevara, B., & Gameiro, S. (2018). Pictorial and spatial metaphor in the drawings of a culturally diverse group of women with fertility problems. *Visual Communication*.  
<https://doi.org/10.1177/1470357218784622>

#### **General rights**

Copyright and moral rights for the publications made accessible in the Aberystwyth Research Portal (the Institutional Repository) are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the Aberystwyth Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the Aberystwyth Research Portal

#### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

tel: +44 1970 62 2400  
email: [is@aber.ac.uk](mailto:is@aber.ac.uk)

## **Pictorial and spatial metaphor in the drawings of a culturally diverse group of women with fertility problems**

Elisabeth El Refaie, Alida Payson, Berit Bliesemann de Guevara and Sofia Gameiro

### **Abstract**

Metaphor has been shown to be pervasive in the way people talk and write about a whole range of diseases, including infertility. Indeed, some of the most conventional of these metaphorical expressions have become so entrenched in particular discourse communities that they are used unconsciously and automatically, even by people who do not, in fact, agree with their underlying ideological implications. As we argue in this article, eliciting visual metaphors in the form of drawings may reveal the meaning-making processes of individuals in a way that more richly reflects their unique experiences, including those that challenge or disrupt dominant cultural models. Based on an analysis of drawings created by a group of women in Wales from diverse ethnic and religious backgrounds, we show the importance of taking into account both explicit pictorial metaphors and any metaphorical meanings suggested by spatial composition, as well as the specific socio-cultural context in which they were created.

### **Keywords**

infertility, cultural diversity, drawing workshop, pictorial metaphor, spatial composition, visual metaphor

## **Introduction**

Researchers have identified regular patterns of metaphor use in the discourses of patients, medical professionals and journalists about a whole range of diseases, including cancer (Williams Camus, 2009), dementia (George and Whitehouse, 2014), and depression (Fullagar and O'Brien, 2012). Infertility, too, is often framed in metaphorical terms, for example as a purposeful, goal-directed journey, a battle, or a game, race, or lottery (De Lacey, 2002; Friese, Becker and Nachtigall, 2006; Palmer-Wackerly and Krieger, 2015). The bulk of the existing literature focuses on the dominant verbal metaphors used by majority populations in Western societies. Given our increasing awareness of cross- and intercultural variations in metaphor use (e.g., Kövecses 2005, 2015; Maalej and Yu 2011), this limited perspective is unsatisfactory. Moreover, some of the most prevalent of the underlying conceptual metaphors relating to disease, and the conventional verbal expressions they tend to generate, have become so familiar and entrenched over time that they are difficult to avoid, even if they may not, in fact, adequately reflect the experiences of individual sufferers.

The main argument put forward in this article is that, when people are asked to express their thoughts and emotions about complex health issues through visual metaphor, they are less restrained by linguistic conventions and thus better able to convey their own unique practices of sense-making, which may be marginal or alternative to dominant cultural models. This argument will be developed with reference to the artwork created by a small group of women of diverse cultural, ethnic and religious backgrounds in Wales, in a study that piloted the use of drawing workshops as a way of eliciting their experiences of fertility problems. The

participants were invited to visualize their thoughts and feelings by drawing pictures of concrete creatures, objects or places. We will show how the resulting drawings were shaped by the women's multiple, intersecting social and cultural identities, including their – often rather fraught – relationships with their extended families and communities.

Visual metaphor may take different forms: (Verbo-)pictorial metaphors involve the visual representation of concrete entities in a way that draws attention to their non-literal nature (Forceville, 1996; 2009), whereas, in the case of what we shall call 'spatial' metaphors, the relative size of and physical distance between elements, as well as their placement and orientation on the page, are used to express abstract meanings, by association with their embodied correlates in real-life experience.<sup>1</sup>

Scholars have tended to focus on either one or the other of these two types of visual metaphor, and to neglect the ways in which they interact and modulate each other in many contexts. Anything we depict visually must be placed somewhere on the page, and, if there are several visual elements in a design or artwork, they inevitably enter into spatial relationships with each other. Hence, the composition of many visual designs, including those based on pictorial metaphor, is likely to carry metaphorical meanings that are motivated by embodied spatial experience, meanings which must also be taken into account when interpreting such designs.

In our study, the women's drawings were analysed by first categorizing the source and target domains of the (verbo-)pictorial metaphors used, and then identifying any metaphorical meanings in the spatial composition of the drawings. As will be shown, in many cases such spatial metaphors added important meanings to the more consciously and deliberately chosen pictorial metaphors, although both types of

---

<sup>1</sup> A third type of visual metaphor has been identified by El Refaie (forthcoming): In the case of 'stylistic metaphors', visual features such as colour, shape, and quality of line are used to indicate an abstract concept or a non-visual sense perception.

visual metaphor could only be interpreted accurately by taking the women's own comments and explanations into account.

### **Culture, metaphor and disease**

Metaphor is so ubiquitous in the way people conceptualize and talk about illness that it seems almost inevitable (Bleakley 2017). In a study of the narratives of female cancer patients, for instance, Gibbs and Franks (2002) found that a large majority of the metaphorical expressions they used conceptualize the disease as an obstacle in their journey of life, or as a way of offering them a new outlook on their lives. These metaphors, the authors argue, are closely bound up with ordinary experiences of the healthy body, including conventional mappings between a purposeful life and a journey, and between seeing and understanding. It is important to remember, however, that the characteristics, perceptions and actions of our bodies that we understand to be 'ordinary' are largely determined by culturally specific values and assumptions, including those relating to race, ethnicity, class, gender, and age. Even the great faith placed by contemporary Western societies in vision as the most rational and 'revealing' of our senses is far from universal; as Howes (2005) points out, the ranking of the human senses in terms of prestige and credibility varies from one culture and social context to another and is always intimately bound up with dominant ideologies.

Another very common way of thinking and talking about disease in contemporary Western societies is as a battle against enemy combatants. This metaphor first appeared in Western biomedicine when germ theory was formulated in the second half of the 19<sup>th</sup> century, though it now permeates every level of medical culture and practice (Montgomery, 1993). Sometimes it applies to the entire illness

experience, including the patients' actions and emotions in relation to their treatment, while in other contexts, it is the physical disease in the individual body that is regarded as the enemy (Stibbe, 1997).

Infertility, defined as the inability to conceive a child after 12 months of regular unprotected sexual intercourse (Zegers-Hochschild et al., 2009), is also frequently conceptualized in metaphorical terms. Although it is not life-threatening, it is nevertheless considered to be a disease, which, furthermore, is frequently associated with intense negative emotions such as anxiety, grief, shame, isolation, and a sense of failure (Cousineau and Domar, 2007). For many, fertility treatment is also a highly stressful experience, as it can be costly and success rates are relatively low. Infertility research has tended to focus on heterosexual, white, middle-class couples and to neglect the important role of people's ethnic and socio-cultural background in their experiences of infertility and their ability to successfully adapt to it. One of the few existing studies of the British South Asian community revealed a strong pronatalist ideology, with intense family pressure being placed on couples to have several children and, in particular, boys, although in the younger generation the prevalence of such attitudes was diminishing (Culley and Hudson, 2009).

People's intersecting cultural beliefs, norms and values about the purpose of life and relationships in any given society have been shown to shape (and, in turn, be shaped by) the metaphors used most commonly to represent the experience of infertility (Becker, 1994; Hobbs, 2007). Thus, women in rural Cameroon of the 1980s expressed their intense preoccupation with reproductive health through violent imagery involving plundered kitchens and the interference by supernatural forces in the preparation of wholesome food through the addition of the wrong ingredients or by shaking the pot, for example (Feldman-Savelsberg, 1994). In the US and Australia,

by contrast, the most common metaphors used to talk about infertility reflect a shared cultural assumption about the need for individualistic, goal-directed, competitive agency. In the media and self-help books, women undergoing fertility treatment are typically framed as winners or losers in a kind of game, lottery, or a race against the biological clock, whereas infertile men and women themselves often prefer to conceptualize the process as a journey, battle, or a type of job involving the deliberate investment of their bodily and monetary resources (De Lacey, 2002; Friese, Becker and Nachtigall, 2006; Palmer-Wackerly and Krieger, 2015).

Although these dominant metaphors may help people with fertility issues to make sense of their own experiences and share them with partners, family, friends, and health professionals, they can have negative effects, too. Game or battle metaphors, for example, can give some patients and health professionals a sense of common purpose, but they tend to encourage a focus on the biomedical parameters of infertility and neglect the more social and affective aspects of the experience. This is particularly unhelpful in cases where someone has reached the end of the line in terms of the treatment options available to them; for these people, having their fertility problems framed in terms of winners and losers may exacerbate their sense of isolation, guilt and failure, as well as making it harder for them to face reality and start imagining alternative futures.

In counselling and art therapy, the advantages of deliberately introducing novel metaphors to help individuals and families overcome entrenched patterns of thinking about infertility have long been recognized. Atwood and Dobkin (1992), for instance, report on the successful use of the metaphor of a passing storm in infertility counselling, while Lemmens et al. (2004) encouraged the participants in a multi-family group therapy session to explore their feelings about infertility by imagining

and drawing themselves as a tree. However, to the best of our knowledge, our research project represents the first attempt to encourage women from a range of different cultural, ethnic and religious backgrounds, who are or have previously been affected by fertility issues, to create their own visual metaphors to represent their experiences.

### **Forms of visual metaphor**

According to Conceptual Metaphor Theory (CMT), metaphor is fundamental to human thought, allowing us to draw on our concrete sensorimotor experiences ('source domains') in order to understand more abstract meanings relating to mental states, emotions, and social relations ('target domains') (Lakoff and Johnson, 1980). For example, our experience of gravity, including the way it requires constant effort and energy to resist its effect on our bodies as we endeavour to stay upright and mobile, leads us to associate 'up' with positive emotions and values, and 'down' with their respective opposites. In Western societies, where competitive individuality is particularly encouraged, being 'down' is correlated not only with illness and death, but also with low status, moral deficiency, and lack of individual agency and power (e.g., GOOD IS UP, HAPPINESS IS UP, HEALTH IS UP, STATUS IS UP) (Gibbs, 1994). Such mental mappings are so ingrained in our conceptual system, CMT claims, that they are typically processed without our conscious awareness, yet they have a large influence on our understanding and behaviour, as well as generating clusters of related verbal metaphors (e.g., *'feeling up/high/on top of the world'*; *'being low/down[trodden]'*).

As scholars from a range of different academic disciplines have begun to discover, underlying mental mappings between embodied experience and more



abstract meanings also find frequent expression in visual design. The placement of two or more press images in close physical proximity often implies emotional closeness, for instance, while being in the middle can, depending on context, signify either keeping two entities or people apart, or mediating between them (Huxford, 2001). In cinematic art, closeness or distance between characters is also commonly used to indicate how they feel about each other, while their relative size is able to exploit the conceptual metaphor IMPORTANCE IS SIZE/VOLUME in order to convey tacit messages about their respective significance and power relations (Coëgnarts and Kravanja, 2012). Another relevant feature of visual composition that may carry metaphorical associations is based on the experience of having a body that acts as a container with a clear inside and outside; in document design, for instance, the principle of ‘enclosure’ refers to the use of ‘lines, borders, and shadings’ in order to ‘show separation and to group complex objects’ (Kimball et al., 2007: 35).

In the visual semiotic culture of Western societies, Kress and Van Leeuwen (2006) suggest, compositions with a clear up-down contrast have, over time, acquired potent conventional meanings, with the upper half of the picture space or the page typically representing the ‘idealized or generalized essence’ of the information, and the lower half the ‘more specific’, or ‘down-to-earth’ information (p. 187). Feng and O’Halloran (2013: 331) draw on CMT to argue that this notion of the ‘Ideal’ is motivated by the well-established conceptual metaphor GOOD IS UP and the related but slightly different underlying mapping UNREALISTIC IS UP, which stems from the experience of attractive things sometimes being too high up to be reached. Psychological experiments, including one involving participants from 22 different linguistic backgrounds, are remarkably consistent in their discovery of systematic conceptual links between UP and DOWN, and positively or negatively valenced words,

images, or memories, respectively (Crawford, 2006; Marmolejo-Ramos et al., 2013). These findings appear to confirm Feng and O'Halloran's intuition that the associations we have with up-down orientation in layout are based on universal embodied experience rather than on socio-cultural conventions alone.

The metaphorical meaning potentials of left and right are more complex. A range of empirical studies have demonstrated that there is a clear tendency for people to imagine specific events, and time in general, as evolving in the same direction as reading and writing in their own culture. In other words, in cultures with a left-to-right script direction, the agent of an action and the past are mentally represented preferentially on the left, whereas the recipient of an action and the future are placed to the right (Maass et al., 2009; Santiago et al., 2007). In cultures with the opposite writing direction, these unconscious associations are reversed (Fuhrman and Boroditsky, 2010). However, the specific direction of this association is apparently 'remarkably flexible', since it can be manipulated by presenting the instructions and stimuli of an experiment in either the standard, mirror-reversed, or rotated orthography (Casasanto and Bottini, 2014: 478). This suggests that, for people who are familiar with two or more scripts with distinct writing directions, subconscious mappings between left-right and past-future may be particularly malleable.

Other meanings associated with left-right orientation in visual design appear to be related not to writing direction but to handedness. In a series of value judgement tasks, right-handers were significantly more likely to prefer things presented to them on their right side, whereas left-handers preferred those on the left (Casasanto, 2009). Moreover, there exist, across all known human cultures, powerful and enduring positive cultural associations with the right and negative with the left, which are based on the fact that right-handed individuals make up around 90% of the population

(McManus, 2003: 39). The many potential meanings of the left-right orientation demonstrate that it is not possible to determine spatial metaphorical meaning without taking into account the specific discourse context and each individual image-creator's unique bodily predispositions, cultural values and habitual practices.

These different forms of 'spatial' metaphor can be distinguished from (verbo-) pictorial metaphors, which involve the visual representation of one or more concrete things in a way that evokes a metaphorical meaning through the use of specific formal cues (Forceville, 1996; 2009). In the case of hybrid metaphors, two disparate entities, such as a car and a tiger, are fused into one overall figure, whereas in pictorial similes they are depicted separately but in a way that strongly suggests their equivalence. Contextual metaphors are those where only one of the two elements is depicted, while the other is implied by appearing in a setting where we would normally expect something else (e.g., a tiger inside a garage). Verbo-pictorial metaphors, finally, require language in order for viewers to grasp the metaphorical meaning of an image: for example, a standard picture of car is transformed into a metaphor through the addition of a verbal caption that compares it to a tiger, or vice versa.

Spatial and pictorial visual metaphors are generally discussed as separate phenomena, even though they are in fact closely connected in many instances of naturally occurring visual data, including in the drawings produced by the participants in our study, who, as we will attempt to demonstrate in the following discussion, used both forms of metaphor to convey their experiences of infertility from the unique perspective of their own intersecting social and cultural identities.

### **Case Study: Data and Methods**

The materials discussed below were collected during a one-day drawing workshop that had two principal aims: a) to elicit both visual and verbal data about the infertility views and experiences of a group of women from diverse cultural backgrounds in Wales; and b) to produce a booklet of the main results and selected drawings for dissemination purposes.<sup>2</sup> In partnership with a charity in Cardiff, we recruited nine women between the ages of 30 and 59 (average age 42). Cardiff, a port city with a long history of migration, has a culturally and ethnically diverse population. This heterogeneity inflects our study, as participants had links with nine nations, spoke French, Urdu and Arabic as well as English, and identified as Muslim or Christian, for example. Five of the women were originally from South Asia, two from Sub-Saharan Africa, and one from North Africa; another participant was a British-born White Muslim married to a North African. Some were trained professionals, whereas others were mainly homemakers. They also had different levels of English proficiency, ranging from native and near-native to limited oral skills only. Participants worked in small groups and sometimes helped to interpret for each other. Only one of the participants had some training and experience in art; the others had not drawn much or at all since childhood. Four women reported experiencing fertility problems in the present and five in the past. Most of the latter had eventually managed to conceive, but one was still childless, while another was trying for a second child and was once again experiencing fertility problems.

The workshop was structured to include a range of drawing activities of increasing complexity. We started with a discussion of infertility-related comic strips by artist Paula Knight ([paulaknight.wordpress.com](http://paulaknight.wordpress.com)), before guiding the participants through some basic drawing exercises of objects and people. Then the women were

---

<sup>2</sup> The booklets (in English and Welsh) can be viewed and downloaded at: <http://psych.cf.ac.uk/engagementimpact/thornsandflowers/>

introduced to the concept of visual metaphor and invited to draw their experience of infertility and its effect on their relationships by representing it visually first as a creature or animal, then as a place or situation, and finally as a weather condition. These source domains were chosen on the basis of their prevalence both in Knight's work and in other comics by both Western and non-Western creators dealing with physical or mental ill-health (see, e.g. El Refaie, 2014; 2015). The workshop ended with a free drawing session, which allowed the participants to produce a large-scale drawing of any aspect of their infertility experience in any form they chose.

The four authors of this article were involved in all stages of the workshop, taking it in turns to facilitate the exercises and participating in some of the drawing sessions and discussions; however, they were careful not to influence the women's choice of themes or compositions in any way. The artist joined the workshop at the end, engaging in informal conversations with some of the women about her own artwork and the drawings they created.<sup>3</sup>

The drawing exercises, which were characterised by a relaxed, collaborative atmosphere and lots of lively interaction and humour, were interspersed with small-group discussions and plenary sessions, where the women were invited to present their artwork. All the talk throughout the workshop was audio-recorded, with one of the authors (A3) also taking additional ethnographic notes. These audio-recordings were transcribed and analysed by two of the authors (A3 and A4), following the procedures recommended by Braun and Clarke (2006), in order to identify the main emergent themes relating to the specific infertility experiences of BME women, how

---

<sup>3</sup> While the power dynamics between participants and the authors, who bring their own multiple intersecting migration, cultural, ethnic and religious identities to this research, are complex, they are beyond the scope of this paper and will be developed in detail in future work. Their influence on the analysis of visual metaphor here is mitigated, at least in part, by the way our interpretations were always guided by the meanings participants themselves offered for their drawings in the workshop.

these experiences affected their relationships with their partner, family and community, and how they viewed any healthcare they had received.

The drawings were analysed by A1. First all the drawings that contained at least one pictorial metaphor were categorised according to the taxonomy developed by Forceville (1996; 2009). Any written words on the drawings themselves and any comments of the women who created the images as captured in the audio recordings were used to support the identification of the source and target domain(s) of each metaphor, and of the nature of the similarity between the two domains of the metaphor, including information about underlying cultural beliefs and values. In a second step, any significant spatial metaphors in the drawings, such as relative size, up-down and left-right orientation, closeness/distance, and inside-outside relations, were identified. Again, we were careful to take any verbal references to spatial metaphorical meanings into account, though, following CMT, we did not expect all such meanings to be created and processed consciously and deliberately. All the images were analysed in depth, but we are only able to present three examples in this article; these were chosen because they were particularly striking and illustrative in terms of their use of spatial layout.

### **Case Study: Results**

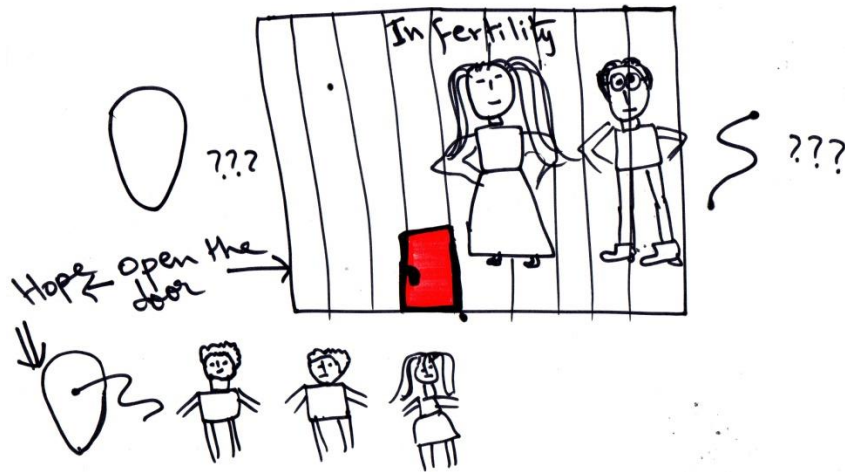
Our analysis of the drawings revealed that, of the thirty-five metaphorical images produced by the women to represent their experience of infertility, the vast majority were of the verbo-pictorial variety, as defined by Forceville (2009); in other words, without the context of a workshop on infertility and/or the additional verbal labels or oral explanations, these images could have been interpreted literally (for an overview, see Table 1 in the Appendix). Exceptions include a self-portrait with a heart drawn

roughly over the place where the womb would be (number 18), which might be described as a ‘contextual metaphor’, and the image of a womb half filled with flowers and half with thorns (19), which, even in the absence of any verbal context, invites a metaphorical reading by showing an incongruous form. Many of the pictures also draw on metonymic meanings, conceptual projections ‘whereby one experiential domain (the target) is partially understood in terms of another experiential domain (the source) included in the same common experiential domain’ (Barcelona 2000: 4). For example, an egg and sperm together (9 and Figure 1) may act as metonyms for the process of conception, and a mosque is able to evoke the notion of faith (16 and Figure 3).

In the case of those drawings that contained just one visual scene or object/creature, their spatial orientation often did not appear to carry any particular metaphorical significance for the image creators or the other workshop participants; certainly, they were not mentioned in the women’s discussions of the artwork. However, particularly those drawings which were created in the final stage of the workshop and which typically combined several different ideas into one overall design, often displayed a highly complex spatial composition that enhanced or contributed additional meaning to the pictorial metaphors. In many cases, such spatial metaphors were alluded to either in verbal labels or symbols, such as arrows, on the artwork itself, or in the talk that accompanied the creation and presentation of the drawings.

In the following discussion, we present a more detailed metaphor analysis of three of the drawings (20, 25, 27 in Table 1) that displayed a particularly striking use of spatial layout. The first of these (Figure 1) was created by participant 1 (P1) during

the stage in the drawing workshop when participants were invited to draw a place or situation to represent their infertility experience.



**Figure 1**

P1 has drawn a woman and man standing close together inside a cage-like prison labelled 'infertility', which is placed approximately in the middle of the page, with a larger-than-life ovum, followed by three questions marks, drawn on the same side as the self-portrait (left) and a sperm and three questions marks on the side of the portrait of her husband (right). The prison has a very small door (coloured red in the original). To the left of the cage, just below the ovum, are the words 'Hope open the door' (sic), with arrows pointing horizontally in both directions, and another double arrow steering the eye downwards to a drawing of an ovum being fertilized by a sperm, followed, from left to right, by three children, two boys and a girl.

The woman is larger than the drawing of her husband, she looks slightly more cheerful and confident than him, and the artist has also placed her in a more



prominent position, almost exactly in the centre of the prison and just beside the door leading to the hoped-for future. Moreover, the prison bars are, in fact, only covering one of the woman's arms; the rest of her body, unlike that of the man, actually appears to be outside the cage. This suggests that P1 views it as mainly the woman's responsibility to lead the way through the tiny door, which, as she explains, represents the effort, courage and hope it requires to pursue their dream of having a family. The enormous size of the ovum and sperm, by contrast, shows how central these bio-physical aspects are to P1's understanding of infertility. When presenting her drawing to the group, she described the meanings she was trying to express in the following way:

#### **Transcript extract 1<sup>4</sup>**

P1: It's like a place, infertility is like a prison, like a both sides infertility. The woman is asking whether it's my fault or a lot of thoughts going on what is going on the husband as well, which I symbolize with the sperm and erm, but the prison there is a door in it which is like erm hope, and there are here children and there is an egg which is like conceived, like there is hope for all dark period or erm there is always hope.

A1: It's a very small door though isn't it?

P1: But that is, there is a door.

A1: You have to crawl through it.

P1: Yeah, this maybe if you get through the thoughts like the door you can open

---

<sup>4</sup> The workshop participants were allocated random numbers (P1, P2,...) to ensure anonymity, while researchers/authors are indicated by the letter A. The extracts from the audio recordings are presented as continuous text, with orthographic marks providing basic information about intonation (a question mark denotes rising intonation, a full stop denotes falling or final intonation, and a comma denotes continuing intonation, whether within or across clause boundaries). Three full stops in square brackets indicate the omission of a section of talk.

it. As you know, 'cause it's not open, it depends on your perception, perception of things, you may have a door you may not. It depends on how you consider things.

Drawing on the TIME IS SPACE and LIFE IS A JOURNEY metaphors, the 'dark period' in the couple's life is represented here through the concrete pictorial metaphor of being inside a cage, which prevents them from moving on with their lives. As discussed above, the left and right have been shown to have many different potential metaphorical meanings, depending on the context. In this case, the horizontal dimension seems to be used primarily to emphasize the equal roles played by the man and the woman in procreation and the possibility of infertility being due to physiological problems with either partner ('a both sides infertility'), whereas the left-right orientation is clearly associated with temporal progression. Thus, in the upper half of the image, the suggested direction of action/movement is from right to left, with the couple on the right of and their feet facing towards the prison door on their left. In the lower part of the design, we switch to a left-right reading pattern, with the fertilized ovum leading to two boys and then a girl, which is likely to represent P1's ideal family constellation. Given that P1 is able to write both left to right (English) and right to left (Arabic), it is perhaps not surprising that her subconscious mappings between left-right and past-future appear to be rather flexible. Overall, this drawing reveals the intense nature of P1's desire to have children, which is experienced as so overwhelming that it is temporarily preventing her from moving on with her life, but it also shows faith in her own strength, optimism and ability to free herself and her husband from this emotional prison.

The second example (Figure 2) uses the verbo-pictorial metaphor of a rift valley to represent participant P2's feelings of low self-esteem as a result of the social rejection she has experienced both on the part of her extended family in her (African) country of origin and from her community in Cardiff.



**Figure 2**

The rift valley is drawn as a big chasm separating her large and detailed self-portrait on the right-hand side, from eight much smaller stick figures labelled 'community' on the left. At the top of this chasm, P2 has written, one above the other, the words 'love, confidence, self-esteem, enthusiasm, disbelief', each of which is accompanied by a small, downward-pointing arrow. In the bottom right-hand corner of the rift valley we find the words 'trying to bridge the gap by being cheerful', which are connected to B's self-portrait through an arrow. Although there is also a line leading from the bottom of the valley out towards the side of the community, the lack of an arrowhead, and the way all the stick figures are turned away from the gap, while she is turned towards it, suggest that all the effort being made to bridge the gap is exclusively on

her part. In contrast to P1, participant P2 did not feel very supported by her husband, which is reflected in the fact that he is completely absent from this visual scenario.

### **Transcript extract 2**

P2: The community could be like the people with whom you grew up your worship community your your schoolmates your friends your in-laws and so on. So they might they might have like stereotypes depending on the community around the infertility issue. They might think you have problems you have a curse there are issues that you did, and it's a like it's like an ancestral curse on you? So you know they disbelieve you're you're the fact that you're just a normal human being and this calamity happened to you could be an accident that could happen to any other person, and in that case it it dwindles down your enthusiasm in life, you you know your enthusiasm when you want to forge ahead to be yourself or to be the best you want to become [...] you know they really put you down and your self-esteem it deflates you, your confidence goes down and then it might affect your love. So because when the mind is overcrowded it's it's it's difficult to love, but again like hope that cuts across all the discussion you should try to be cheerful and then just be yourself to bridge this gap. Pushing ahead more or less.

It is striking how many of the expressions P2 uses to describe what she wanted to express with this drawing are motivated by the conceptual metaphors LIFE IS A JOURNEY ('when you want to forge ahead', 'pushing ahead') and SPATIAL DISTANCE IS EMOTIONAL DISTANCE ('cuts across all the discussion', 'bridge this gap'). There is also

a clear sense of the body as a container filled with emotions ('it deflates you', 'your mind is overcrowded'), and of powerful associations between the spatial orientation of down and negative experiences ('it dwindles down your enthusiasm in life'; 'they really put you down'; 'your confidence goes down'). Although P2 does not explicitly mention the left-right orientation of her visual design, the fact that she has drawn herself facing towards the left-hand side, which, in cultures like hers that write from left to right, tends to be associated with the past, reinforces the sense that she is unable to 'forge ahead' with her life and instead is preoccupied with how to re-establish herself as part of the community. However, the size of her self-portrait relative to the other people, its cheerful, self-confident facial expression and body language, and the obvious pride in her appearance give a clear sense of a woman who refuses to be cowed and is ready to face all her problems head-on.

The third example (Figure 3) represents participant P3's attempt to combine some of the drawings she had created previously in the workshop to create one overall visual drawing of 'infertility as something nasty but then using faith to then be happy', as she explained while planning the layout of her design. The final drawing is split, through two vertical pencil lines, into three 'panels' of roughly equal size. Using the rim of a mug to trace three perfect circles, placed at the same level along the horizontal axis, P3 has drawn a sad face and the word 'infertility' in the circle on the left, 'mosque' in the one in the middle, and 'be happy' with a smiley face on the right-hand side.



**Figure 3**

Each of the three circles is surrounded by written words expressing aspects of or feelings associated with infertility ('pressure', 'family', 'sad', 'failure'), the mosque ('God', 'blessing', 'pray', 'hope'), and with achieving a state of acceptance ('relax', 'enjoy life!'), respectively. The first panel also contains a drawing of a snake. P3 had come up with the visual metaphor of a snake earlier in the workshop, in response to the invitation to draw 'an animal or creature' to represent her experience of infertility (6 in Table 1). As she explained, her experience of waking up to find a large snake in her bed one night when she was a child had led to a life-long phobia, which makes this pictorial metaphor particularly potent for her. In the original drawing, the snake was drawn slithering diagonally up the page from the bottom left to the top right-hand corner, but here the direction is reversed, so that it faces to the left, away from the drawing of the mosque.

### **Transcript extract 3**

P3: I just [...] put um all the struggles to do with infertility in the first picture and all the feelings that come with it, um and my animal which is the snake, so um so it affects relationships, your deservability. You're stressed, it affects family life you feel like you're a failure, you feel sad, pressure, you get labelled, all that comes with infertility. But one of the like my solution was to have to trust God and put your faith in it in your you know what you're destined to have, pray, there's hope, erm if you're blessed then you'll get a child, but if you're not then I think this is like, just be happy with whether you have a child or not. Relax and enjoy life, and I think the key message for me from personal experience is just relax, because we get too stressed with you know with all the pressures from within ourselves from partners and from family and from community, that the stress is actually a um is a you know it stops you actually conce- it's one of the factors, so it's so relax and enjoy life and it will come if it's meant to.

As Huxford (2001) suggests, the placement of one image in the middle of two other images can signify either keeping two entities or people apart, or mediating between them. In this case, the picture of the mosque clearly fulfils the latter role. As P3 explains, the three panels are meant to be interpreted as representing a temporal transformation that she experienced herself, starting with a state of complete terror and desperation, and leading, via faith and acceptance, to the ability to relax and be content, which, she is convinced, helped her to conceive. In the first and final panel, the circles represent the woman's mind as a container of either lots of negative

emotions and fears, or of a peaceful sense of acceptance, whereas, in the central panel, the space inside the circle stands for both the literal place of the mosque and the thoughts, feelings and attitudes that her faith enables her to cultivate inside herself. This demonstrates P3's intensely personal and spiritual experience of religion.

### **Discussion and conclusion**

The importance of visual metaphors in communicating with people who are suffering from a variety of physical and mental diseases, including infertility, has long been recognised by counsellors and (art) therapists (Burford, 1998; Atwood and Dobkin, 1992; Lemmens et al., 2004), yet scholarly work on metaphors in health communication has always tended to focus on the most common verbal metaphors people use to talk or write about the illness experience (e.g., Charteris-Black, 2012; Gibbs and Franks, 2002). The problem with this verbo-centric approach is that metaphorical expressions, and the conceptual mappings that underlie them, may over time become so naturalised in a particular discourse community that they are used unconsciously and automatically by a majority of speakers, even if they may contradict some of these individuals' own values and experiences (George and Whitehouse, 2014). As we have argued throughout this article, visual metaphors are less constrained by convention and constant repetition, thereby opening up new opportunities for people to articulate thoughts and feelings that may challenge or even contradict dominant cultural assumptions about the (female) body and its (mal)functions.

To the best of our knowledge, our study represents the first attempt to analyse the drawings created by a group of women with a specific health problem in order to identify not just the pictorial metaphors they chose to use, but also some of more



implicit and less conscious metaphorical meanings they were able to express by drawing on correlations between the experience of our bodies in space and abstract concepts and values.

Our research design and analysis of the drawings is based on the premise that ‘we all theorize about our geographies of being’ (Tolia-Kelly, 2010: 40); that is, we all make sense of our embodied experiences in distinct ways. The metaphor elicitation opened up a way for participants not only to convey taboo or sensitive feelings but also to critique the social and cultural formations converging in the experience of infertility ‘as lived in and through [...] women’s embodied subjectivities’ (Mirza, 2013: 7). As elaborated above, the spatial arrangements in the drawings of the prison, the rift valley and the triptych with the mosque at its centre give form to some of the specific social and structural contexts that shape the participants’ experiences of fertility problems: feelings of emotional entrapment and escape, social isolation and strength of self, the comfort and transfiguring potential of faith. By contrast, none of the women’s drawings contain any references to military metaphors, and nor do any of them represent their desire for a baby as a game or race with winners and losers, even though these images are apparently widespread in verbal discourses about infertility in Western societies (De Lacey, 2002; Friese, Becker and Nachtigall, 2006; Palmer-Wackerly and Krieger, 2015). This suggests that many of the most conventional verbal metaphors may miss or even contradict key aspects of some women’s infertility experience, especially if, like our participants, they are more concerned with their relationships than with individualistic notions of personal success or failure.

Despite suffering serious discrimination and rejection on the part of their extended families, wider communities, and sometimes even their partners, the women

in our study displayed remarkable resilience and the ability to maintain a positive outlook on the future, be it with or without children. This sense-making seemed to emerge at least partially through the very process of creating composite drawings of a kind that, as Arnheim (1969) suggests, may 'serve not simply to translate finished thoughts into visible models but are also an aid in the process of working out solutions of problems' (p.129). In this way, the drawings thus opened up new opportunities for the women to express the uniqueness and richness of their individual perspectives, while avoiding some of the traps set by culturally dominant ways of talking about infertility through entrenched metaphorical expressions.

The methods of visual analysis employed in this study will also, we hope, encourage visual and cultural scholars to look more carefully at all the different aspects of visual composition and design that invite metaphorical interpretations through analogy with the experience of our bodies in space. When authors have discussed such meaning potentials in the past, they have tended to focus on just one or two spatial dimensions in a particular visual medium and genre, and to attribute very specific and narrowly defined meanings to these spatial dimensions. A case in point is art historian Parsons' (2010) suggestion that verticality in Western art evokes meanings associated with self-confidence and good character, whereas Kress and van Leeuwen (2006) believe that the meaning potential of the vertical dimension is best described in terms of the 'Ideal' and the 'Real'. By contrast, we take the view that spatial orientations may have a whole range of metaphorical meanings, depending on the specific context in which they are used and the unique predispositions and cultural backgrounds of the individual image creators. In this study, the visual metaphor analysis was supported by a qualitative analysis of the verbal data generated in the small group and plenary discussions of the drawings in the workshop, which helped

us decide whether the spatial layout of the women's visual designs was significant, and, if so, which of many potential metaphorical meanings the artist had intended to convey.

### **Funding:**

*This work was supported by the Welsh Crucible Small Grants Scheme 2015.*

### **References**

- Arnheim R (1969) *Visual Thinking*. Berkeley: University of California Press.
- Atwood JD and Dobkin S (1992) Storm clouds are coming: Ways to help couples reconstruct the crisis of infertility. *Contemporary Family Therapy* 14(5): 385–403.
- Barcelona A (2000) Introduction: The cognitive theory of metaphor and metonymy. In: Barcelona A (ed) *Metaphor and Metonymy at the Crossroads: A Cognitive Perspective*. Berlin and New York: Mouton de Gruyter, pp. 1-28.
- Becker G (1994) Metaphors in disrupted lives: Infertility and cultural constructions of continuity. *Medical Anthropology Quarterly* 8(4): 383–410.
- Bleakley A (2017) *Thinking With Metaphors in Medicine: The State of the Art*. London and New York: Routledge.
- Braun V and Clarke V (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology* 3(2): 77-101.
- Burford E (1998) *Gravity and the Creation of Self. An Exploration of Self Representations Using Spatial Concepts*. London and Philadelphia: Jessica Kingsley Publishers.

- Casasanto D (2009) Embodiment of abstract concepts: Good and bad in right- and left-handers. *Journal of Experimental Psychology: General* 138(3): 351–367.
- Casasanto D and Bottini R (2014) Mirror reading can reverse the flow of time. *Journal of Experimental Psychology: General* 143(2): 473–479.
- Charteris-Black J (2012) Shattering the bell jar: Metaphor, gender, and depression. *Metaphor and Symbol* 27(3): 199-216.
- Coëgnarts M and Kravanja P (2012) From thought to modality: A theoretical framework for analysing structural-conceptual metaphors and image metaphors in film. *Image & Narrative* 13(1): 96-113.
- Cousineau TM and Domar AD (2007) Psychological impact of infertility. *Best Practice & Research Clinical Obstetrics & Gynaecology* 21(2): 293-308.
- Crawford LE et al. (2006) Affect biases memory of location: Evidence for the spatial representation of affect. *Cognition and Emotion* 20(8): 1153–1169.
- Culley L and Hudson N (2009) Commonalities, differences and possibilities: Culture and infertility in British South Asian communities. In: Culley L, Hudson N, and Van Rooij F (eds) *Marginalized Reproduction: Ethnicity, Infertility and Reproductive Technologies*. New York: Earthscan, pp. 97-116.
- De Lacey S (2002) IVF as lottery or investment: Contesting metaphors in discourses of infertility. *Nursing Inquiry* 9(1): 43–51.
- El Refaie E (2014) Looking on the dark and bright side: Creative metaphors of depression in two graphic memoirs. *Auto/Biography Studies* 29(1): 149-174.
- El Refaie E (2015) Scoring a goal or an own-goal against disease? A multilevel framework for describing metaphor coherence in health campaigns. *Metaphor and the Social World* 5(1): 102-123.

- El Refaie E (forthcoming) *Visual Metaphor and Embodiment in Graphic Illness Narratives*. New York: Oxford University Press.
- Feldman-Savelsberg P (1994) Plundered kitchens and empty wombs: Fear of infertility in the Cameroonian grassfields. *Social Science & Medicine* 39(4): 463-74.
- Feng D and O'Halloran KL (2013) The visual representation of metaphor: A social semiotic approach. *Review of Cognitive Linguistics* 11(2): 320–335.
- Forceville C (1996) *Pictorial Metaphor in Advertising*. London and New York: Routledge.
- Forceville C (2009) Non-verbal and multimodal metaphor in a cognitivist framework: Agendas for research. In: Forceville C and Urios-Aparisi E (eds) *Multimodal Metaphor*. Berlin and New York: Mouton-de Gruyter, pp. 19-42.
- Friese C, Becker G and Nachtigall RD (2006) Rethinking the biological clock: Eleventh-hour moms, miracle moms and meanings of age-related infertility. *Social Science & Medicine* 63(6): 1550–1560.
- Fullagar S and O'Brien W (2012) Immobility, battles, and the journey of feeling alive: Women's metaphors of self-transformation through depression and recovery. *Qualitative Health Research* 22(8): 1063–1072.
- Fuhrman O and Boroditsky L (2010) Cross-cultural differences in mental representations of time: Evidence from an implicit nonlinguistic task. *Cognitive Science* 34(8): 1430–1451.
- George DR and Whitehouse PJ (2014) The war (on terror) on Alzheimer's. *Dementia*, 13(1): 120–130.
- Gibbs RW Jr (1994) *The Poetics of Mind: Figurative Thought, Language, and Understanding*. Cambridge: Cambridge University Press.

- Gibbs RW Jr and Franks H (2002) Embodied metaphor in women's narratives about their experiences with cancer. *Health Communication* 14(2): 139-165.
- Hobbs P (2007) Miracles of love: The use of metaphor in egg donor ads. *Journal of Sociolinguistics* 11(1): 24-52.
- Howes D (2005) Introduction: Empires of the senses. In: Howes D (ed) *Empire of the Senses: The Sensual Culture Reader*. Oxford and New York: Berg, pp. 1-17.
- Huxford J (2001) Beyond the referential: Uses of visual symbolism in the press. *Journalism* 2(1): 45-71.
- Kimball MA and Hawkins AR (2007) *Document Design: A Guide for Technical Communicators*. Bedford: Bedford Books.
- Kövecses Z (2005) *Metaphor in Culture: Universality and Variation*. Cambridge: Cambridge University Press.
- Kövecses Z (2015) *Where Metaphors Come From: Reconsidering Context in Metaphor*. Oxford: Oxford University Press.
- Kress G and van Leeuwen T (2006) *Reading Images: The Grammar of Visual Design*. 2nd ed. London: Routledge.
- Lakoff G and Johnson M (1980) *Metaphors We Live By*. Chicago: University of Chicago Press.
- Lemmens GM et al. (2004) Coping with infertility: A body-mind group intervention programme for infertile couples. *Human Reproduction* 19(8): 1917-1923.
- Maalej ZA and Yu N (eds) (2011) *Embodiment Via Body Parts: Studies from Various Languages and Cultures*. Amsterdam and Philadelphia: John Benjamins.
- Maass A et al. (2009) Groups in space: Stereotypes and the spatial agency bias. *Journal of Experimental Social Psychology* 45(3): 496-504.

- McManus IC (2003) *Right Hand, Left Hand: The Origins of Asymmetry in Brains, Bodies, Atoms and Cultures*. London: Phoenix.
- Marmolejo-Ramos F et al. (2013) Appraisal of space words and allocation of emotion words in bodily space. *PLoS ONE* 8(12): e81688.  
doi:10.1371/journal.pone.0081688.
- Mirza HS (2013) 'A second skin': Embodied intersectionality, transnationalism and narratives of identity and belonging among Muslim women in Britain. *Women's Studies International Forum* 36(1): 5–15.
- Montgomery S (1993) Illness and image in holistic discourse: How alternative is 'alternative'? *Cultural Critique* 25(autumn): 65–89.
- Palmer-Wackerly AL and Krieger JL (2015) Dancing around infertility: The use of metaphors in a complex medical situation. *Health Communication* 30(6): 612–623.
- Parsons M (2010) Interpreting art through metaphors. *International Journal of Art & Design Education* 29(3): 228–235.
- Santiago J et al. (2007) Time (also) flies from left to right. *Psychonomic Bulletin & Review* 14(3): 512–516.
- Stibbe A (1997) Fighting, warfare and the discourse of cancer. *South African Journal of Linguistics* 15(2): 65–70.
- Tolia-Kelly DP (2010) *Landscape, Race and Memory: Material Ecologies of Citizenship*. London and New York: Routledge.
- Williams Camus JT (2009) Metaphors of cancer in scientific popularization articles in the British press. *Discourse Studies* 11(4): 465–495.
- Zegers-Hochschild F et al. (2009) International Committee for Monitoring Assisted Reproductive Technology (ICMART) and the World Health Organization

(WHO) revised glossary of ART terminology, 2009. *Fertility and Sterility*  
92(5): 1520-1524.



## Appendix

	Source domain(s)	Target domain(s)	Grounds for similarity	Significant spatial metaphor
1	Shadow ghost/ monster	Emotions	Bigger than you and never leaves you	Size is importance
2	Lion	Emotions	Cruel, heartless and devours everything	
3	Hippo-ape hybrid monster	Emotions	Thought of being childless for ever is as scary as a monster	
4	Octopus	Emotions	Confusing; each leg represents a different aspect/stage of infertility	Centre-margins; left-right
5	Leech	Emotions	Sucks hope out of you, consumes your thoughts	
6	Snake	Emotions	Scary, poisonous; based on own traumatic experience with a snake	From bottom left to top right
7	Rain, clouds, lightening	Emotions	Rain is crying, clouds are feeling gloomy; lightening is sudden burst of anger	
8	Rain	Emotions	Rain as blessing in Islam	
9	Rain vs. sunshine; ovum + sperm = conception	Emotions	Storm cloud is infertility; rain is fertility	Infertility on left with storm cloud, conception on right
10	Changing weather	Emotions	Welsh weather; all the weather in one day	
11	Tree in storm	Emotions	Leaves being blown off	
12	Hailstorm	Emotions	Intense negative feelings	Tiny figure at bottom left of page (walking to the left)
13	Stormy seas	Emotions	People on top of waves or drowning, depending on outcome of fertility treatment	Four horizontal figures on top of waves, fifth (right side) vertical but mostly submerged
14	Autumn; tree shedding leaves	Emotions	Cultural image (Urdu literature)	
15	Desert	Emotions	Nothing grows	
16	Mosque	Emotions, faith	Place of hope, acceptance, prayer	
17	Hands praying; place by the Thames	Emotions, faith	Prayed to God, decided to relax and realised she was pregnant	Praying hand very large in the middle, upper half of the page; Thames tiny below
18	Half-amputated arms, heart in place of womb	Emotions	Unable to reach children	boy (left), girl (right), heart drawn roughly over womb region
19	Womb half filled with flowers, half thorns	Emotions	Unable to be pregnant	Right side of womb flowers, left thorns (ovaries inversed)
20	Prison/cage	Relationships (partner and community)	Feelings of guilt and isolation	Small door (red) enables escape, woman in the middle and in front of bars, to right of man, ovum and sperm outside cage
21	Behind wall with door	Relationships (community)	World on the other side; door is shared faith	Head is just above the top of the wall
22	Rift	Relationships (partner and community)	Husband and wife; also community	

23	Rift (see 22)	Relationships (partner)	Husband and wife	One person on either side of rift; woman left, man right
24	Rift valley	Relationships (community)	Valley: stereotypes, stigma, self-esteem, affects love	Community left (facing away), self right (facing towards)
25	Rift valley (see 24)	Relationships (community)	Valley: love, confidence, self-esteem with arrows pointing down	Community left (facing away), self right (facing towards); downwards pointing arrows
26	Spider's web	Relationships (community)	Individuals get caught up in the web/community relations	Self outside of web, but close
27	Mosque, snake (see 6), faces	Future life	Sad face and snake are bad feelings linked to infertility; mosque is faith; smiling face is future tranquillity	Present anxiety to the left, mosque in the middle, future happiness to the right; snake facing bottom left
28	Birds flying up to the sky	Future life	Happiness after conception	Facing to right, woman ahead, child in the middle
29	Ducks; river; empty swing between two trees	Emotions; relationships; future life	Empty swing is life without children; trees and ducks swimming in river are herself and her husband	Left to right, empty swing without children (verbal label) in background
30	Birds flying up to sky; sun and rain; tiny people	Emotions; relationships; future life	Happy with or without children; don't worry about other people; rain is God's blessing	Facing up and slightly to the right, wings touching; other people are tiny figures in bottom right corner
31	Climbing a mountain; two children inside sun; candle; storm clouds	Emotions; relationships; future life	Unable to climb mountain alone; storm clouds and lightening are bad feelings; successful together; sun is conceptions; candle is hope	Left-right and up-down orientation of mountain climbing; conception/sun in middle upper half
32	Books, glasses, pen; sun-moon; rain; river; two trees	Future life	Happy with or without children; importance of education/career; river is time passing; husband on the other side of the river	Sun left, moon right, river oriented slightly diagonally up on right side, husband and trees on left side
33	Large and small shadow monster (see 1); books, pen	Future life	Changing attitudes through learning; ability to deal with fears	Shadow monster much bigger at top; arrow down to books; smaller monster at the bottom
34	Bird with chick; sun/rain; candle	Future life	Sun rises every day; rain brings blessing; candle is good things	Future dream (having baby) is at the bottom; cyclical quality
35	Womb with face; flower within sun	Future life	Flower/sun is hope of conception	Husband on right-hand side; arrow down to surgery; then to hope of conception