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The Extraordinary in the Ordinary: Skychology – An Interpretative Phenomenological Analysis of Looking Up at the Sky

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Abstract

What do people experience when they look up at the sky? What role, if any, does the sky play in the experience of wellbeing? Against a backdrop of unprecedented global urbanisation, and the erosion of interactions with nature, the answers to these questions matter. Research has neglected intentional interactions with the sky, thus a gap and opportunity exist to understand the phenomenological experience of looking up (the proximal goal of this study) and evaluate its efficacy as a Positive Psychology Intervention (the distal goal). Four participants, who self-reported as having a fascination with the sky, shared their experiences during in-depth, semi-structured interviews. The results surfaced three super-ordinate themes: 'It's one of my needs', 'This is gonna make me feel better' and 'Amazement. Almost every time' which suggest looking up could be operationalised as a PPI, with future directions presented for researchers and practitioners to positively impact lives across the world.

Introduction

Looking up at the sky ('looking up' hereafter) is an activity many consider ordinary. We do it every day, often without realising. Art's most enduring muse, the sky has been revered for millennia from Ancient Greece to the Incan empire, yet little is known about the psychophysiological effects of doing so. A significant body of *nature wellbeing* research extols the benefits of interacting with nature to enhanced psychological wellbeing and physical health (Bloomfield, 2017; Larson, Jennings, & Cloutier, 2016), however research has primarily focused on green and blue spaces (e.g. natural areas in wilderness and urban settings, oceans, lakes, and rivers; Finlay, Franke, McKay, & Sims-Gould, 2015).

Compounded by a dearth of research exploring intentional interactions with the sky, a significant gap, and opportunity, exists to deepen our understanding of the phenomenological experience of looking up – the proximal aim of this study – and operationalise those insights through the creation of new Positive Psychology Interventions (PPIs) – a distal goal beyond this study.

Skychology – a neologism defined as scientific endeavours to understand and operationalise intentional interactions with the sky to enhance wellbeing - is especially salient given the unprecedented rise of global urbanisation, widely acknowledged as one of the most significant health issues of the 21st century (World Health Organisation, 2015). Global urbanisation, which will rise to an estimated 66% by 2050 (United Nations, 2014), has significantly reduced the frequency and quality of interactions – developed over millennia – between humans and natural environments (Cox, Hudson, Shanahan, Fuller, & Gaston, 2017), with recent research suggesting on average less than 10% of each day is spent outdoors in many affluent, industrialised countries (MacKerron & Mourato, 2013; Matz et al., 2014). Crucially, and unlike green and blue spaces, the sky is ‘always on’, unbound by geography or urbanisation and available to virtually everyone. Exploring the potential of the sky to augment psychophysiological wellbeing and operationalising the data through empirically-informed PPIs could positively impact the lives of countless people across the world.

Wellbeing and Nature

A universally agreed definition of wellbeing has proven elusive. Wellbeing has been conceptualised as Subjective Wellbeing (SWB: Diener, 1984), from the hedonic tradition, emphasising how individuals evaluate the quality of their lives based on how they think (cognition) and feel (affect). The SWB ‘formula’ comprises high positive affect, low negative affect and satisfaction with life (1984). Psychological Wellbeing (PWB: Ryff, 1989), from the eudaemonic tradition, instead posits psychological wellbeing across six domains: self-acceptance, positive relationships, autonomy, environmental mastery, purpose in life and personal growth. Later conceptualisations of wellbeing emphasised mental health (Keyes, 2002) and ‘flourishing’ individuals, communities and organisations: positive emotions, engagement, relationships, meaning, and accomplishments (Seligman, 2011).

A significant body of research suggests interacting with nature positively impacts health and psychological wellbeing. Since Ulrich (1984) first identified restorative health benefits from noticing nature for postoperative patients, a multitude of studies have identified links between nature involvement, improved physical health and psychological wellbeing, including higher levels of life satisfaction, attention, positive affect, and decreased levels of stress and anxiety (Capaldi, Dopko, & Zelenski, 2014; Hartig, Evans, Jamner, Davis, & Gärling, 2003). Whilst

findings are consistent, conclusions are often generalised because nature is conceptualised as an amorphous entity; despite being omnipresent in virtually all outdoor nature interactions, the specific influence of the sky on wellbeing is unknown. A gap, and opportunity, therefore exist to understand if and how specific interactions with the sky influence wellbeing.

There is ongoing debate about which psychophysiological mechanisms imbue wellbeing when noticing nature, and how they work (Joye & de Block, 2011). Within the context of this debate, three alternative prevailing theories within the field of ecopsychology will now be highlighted.

First, Attention Restoration Theory (ART: R. Kaplan & Kaplan, 1989) suggests natural environments elicit involuntary attention in humans (a passive state, requiring little or no effort) and, through this effortless “soft fascination”, replenish reserves required for effort-driven, “directed attention” (1989; S. Kaplan, 1995, p. 172). Second, Stress Reduction Theory (SRT: Ulrich, 1981) proposes that natural environments can enhance both positive affect and stress recovery, with their restorative effects triggered when we experience emotional change. The simple act of viewing a natural vista can have an immediate effect on an individual’s psychological and physiological functions, rapidly lowering stress levels (Hartig et al., 2003; Ward Thompson et al., 2012). Finally, the Biophilia hypothesis (Kellert & Wilson, 1993) posits the development of a biological and emotional need to connect with other forms of life, a consequence of human evolution in natural surroundings over millennia. Gathering extensive knowledge about the natural world satisfied primary psychological needs of autonomy and mastery, whilst enhancing mental, emotional, cognitive and spiritual development (White & Heerwagen, 1998.)

Noctcaelador

Research relating to intentional interactions with the sky appears limited to noctcaelador, a psychological construct defined as a “psychological attachment to the night sky” (Kelly, 2004, p. 100). Noctcaelador influences how frequently individuals look at the night sky and where they choose to live (Kelly, 2004) and correlates with absorption (Kelly, Daughtry, & Kelly, 2006), openness (Kelly & Kelly, 2010), and curiosity (Kelly, 2016). The Noctcaelador Inventory (the scale designed to measure noctcaelador) has high internal reliability and validity (Kelly, 2004).

There are limitations within noctcaelador research: The definition is based on similarities with place attachment theory, broadly defined as the emotional attachment between person and place (Low & Altman, 1992), however the strength and accuracy of this association is not empirically evidenced, nor is there any explanation of how noctcaelador attachment occurs. Additionally, noctcaelador studies have almost exclusively been limited to student populations, limiting the generalisability of its findings.

Whilst extant research demonstrates clear links between nature interactions and wellbeing, little is known about intentional interactions with the sky. Drawing on the review presented above, this study aims to deepen our understanding of the phenomenological experience of looking up in response to the following research questions:

- (1) What do people experience when they look up at the sky?
- (2) What role, if any, does the sky play in the experience of wellbeing?

Method

'Seek first to understand, then to be understood'

– Covey (2004, p. 237)

Design

A necessary first step towards the distal goal of skychology (the development of sky-based PPIs) is seeking to understand the experience of looking up at the sky, hence the selection of Interpretative Phenomenological Analysis (IPA), a qualitative approach:

...committed to the examination of how people make sense of their major life experiences [and] what happens when the everyday flow of lived experience takes on a particular significance for people. (Smith, Flowers, & Larkin, 2009, p. 1)

IPA is an inductive approach, embodied by a hermeneutic circle between participant and researcher, as I attempt to make sense of participants making sense of their experiences. Accordingly, this study represents an *interpretation* of the participants' lived experience and is inevitably influenced by my own interpretative biases.

Participants

Drawing upon IPA recommendations for small, homogenous samples (Smith et al., 2009), four people (female = 3) aged between 23 and 45 were invited (through social media) to participate in this study, as detailed in Table 1.

To ensure sampling was consistent with the qualitative paradigm, a purposive sampling approach was employed, with selection based on relative expertise with the phenomena being studied (participants self-reported as having a fascination with the sky). I knew three participants to varying degrees, which helped establish rapport (Peltier, 2010) and the fourth was introduced via referral. The selection criteria required that participants were not experiencing symptoms of vertigo (an ethical requirement) and were available within a four-week period.

Table 1.

Participants' demographics

Name	Sex	Age	Country	Occupation
Neil	M	45	U.K.	Currency Trader
Aurora	F	23	Germany	Postgraduate Student
Daphne	F	31	U.K.	Copywriter
Cielo	F	41	U.K.	Psychotherapist

Interview Protocol

Four 60-minute video call interviews were conducted over a four-week period. An interview schedule (see Appendix A) ensured consistent phrasing of questions, and was adapted based on participants' responses (Smith et al., 2009). Participants were invited to go outside and look up at the sky during their interviews (with no time limit).

Clean Language, an approach to questioning that "facilitates exploration of a person's inner world through their own, naturally occurring metaphors [to] gain a deeper understanding of each participant's symbolic world" (Tosey, Lawley, & Meese, 2014, p. 634) was integrated into the schedule. Clean Language minimises the "propensity for researchers inadvertently to

introduce extraneous metaphors into an interviewee's account, [enhancing] the authenticity and trustworthiness of qualitative research" (Tosey et al., 2014, p. 630). An example of a Clean Language question used was, "And looking up at the sky is like what?"

Procedure

Ethical approval was obtained from my institution prior to commencement. Respondents were sent an invitation letter explaining the nature of the study, ethics, confidentiality, data protection and right to withdrawal. A date and time for each interview was mutually agreed. Participants signed a consent form prior to interview and were debriefed upon completion to reaffirm confidentiality and their right to withdrawal.

Transcription

I manually transcribed each interview verbatim to maximise familiarity with each account prior to analysis. Grammatical and semantic adjustments were kept to a minimum to maintain the integrity and accuracy of the verbatim data and names were replaced with a non-identifiable code to safeguard anonymity.

Data Analysis

I implemented the IPA data analysis stages detailed in Smith et al. (2009). First, following transcription, interviews were re-read to maximise familiarisation. Second, detailed notes were created for one interview. Third, notes were analysed and synthesised to surface the participant's main themes. Fourth, Stages 2 and 3 were repeated for the remaining participants, to create a list of main themes for each (see Appendix B). Fifth, participants' main themes were analysed and synthesised to create a master list of three super-ordinate themes (see Appendix C). A prevalence table of themes is included in Appendix D.

Rigour

To ensure rigour, a critical component of qualitative research (Yardley, 2017), and enhance objectivity, I maintained a reflexive journal to raise awareness of personal assumptions and challenges. The analysis was also audited by an experienced IPA researcher, who had no prior connection to the data, to assess validity, plausibility, and a logical, robust chain of evidence (Smith et al., 2009).

Results

*Sometimes when I consider what tremendous consequences come from little things . . .
I am tempted to think . . . there are no little things.*

– Barton (in Covey, 2004)

The Extraordinary in the Ordinary

As I write this, nearing the end of this fascinating journey, I have come to understand one thing above all: looking up at the sky is an ordinary *activity*, and an extraordinary *experience* – an experience that embodies the *raison d'être* of Positive Psychology, “to make life better” (Lomas, Hefferon, & Ivtzan, 2014, p. 16). The overarching theme of this study – *the extraordinary in the ordinary* – is comprised of three super-ordinate themes surfaced from analysis, shown in Figure 1.

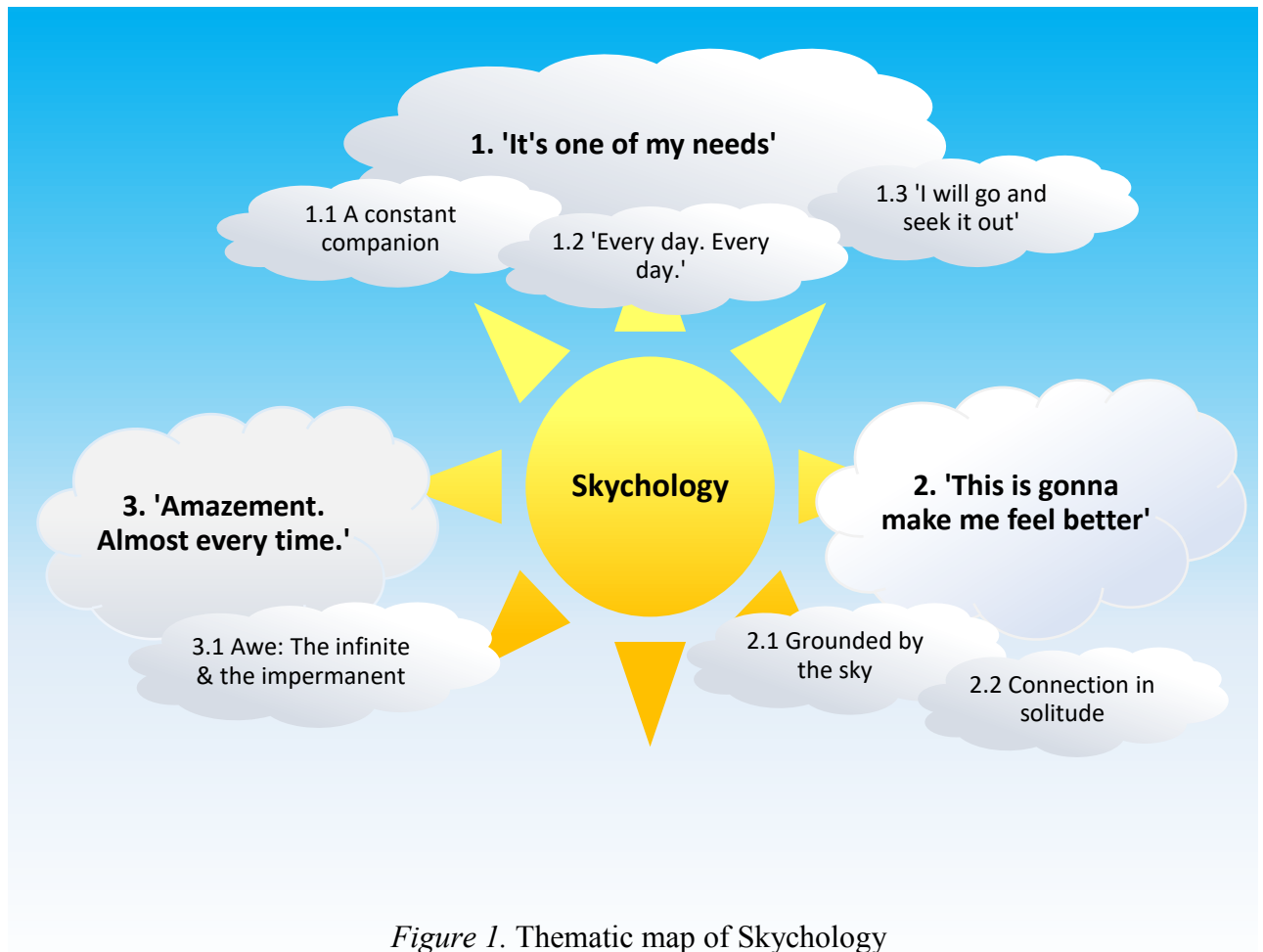


Figure 1. Thematic map of Skychology

This section introduces these themes, evidenced by the participants' own words, to support the results.

Theme 1: 'It's one of my needs'

The sky plays an important role in the participants' lives, manifest as a constant, reassuring presence – akin to a relationship – and as a predilection to be “close to the sky” (Aurora), operationalised as a frequent, intrinsically motivated, self-regulating behaviour.

Sub-theme 1.1: A constant companion

The sky was perceived by participants as a constant, valued presence, often from childhood. Daphne felt “like I've always done it”, and Aurora was “fascinated by the sky when I was little child”. The sky is a reassuring, constant companion:

I will actively seek out to go and spend time each day to go and look at the sky on my own. To me it feels very special, and important and also normal. It's come to be something that I've recognised in my life, over the last 10 years and probably also as a child... it's something I need actually. It's one of my needs. (Cielo)

Like a friend, guardian or mentor, the sky can nurture, support and encourage. Indeed, for Daphne, the sky was a constant, nurturing presence during a time of significant personal difficulty and uncertainty:

[Mum] just broke up with my dad – and then the day after her dad died... she went into full on depression mode and literally didn't get out of bed for a couple of years ... my brothers were away at boarding school and ... I just got very attuned to being able to be by myself and just being outside ... whenever you're in a stressful situation, you can just like look up, you know... I think that helps a lot.

At the heart of this relationship is relatedness. Human emotions are in flux, but so too is the sky. Weather embodies emotion, and through this *emotional weather*, a shared experience of the human condition, through the simple act of looking up:

Even though you're feeling kind of very fluctuating ... in your emotions or your thoughts... there's that reassurance and encouragement of ... the sky that's going through all the motions of the... weather... and the seasons and the days. (Daphne)

Fascinatingly, the participants had never discussed their *experience* of looking at the sky before, its significance becoming apparent during our interviews, prompting internal dialogue:

Even as we're talking about it, I'm realising how important to me this is – in fact probably a lot more important than I've ever really thought before. (Cielo)

A realisation – possibly for the first time – of the extraordinary in the ordinary, perhaps because it was hidden in plain sight, because it was experienced every day.

Sub-theme 1.2: 'Every day. Every day.'

The participants looked up frequently, equating to “six or more times a day probably, at least” for Neil, whilst Aurora “got up at half past five every day to watch the sunrise” the week before we spoke. Looking up is intrinsically motivated and rewarding:

Unless something strange is happening, then it's all intrinsically motivated... not even a conscious thought, just a sort of, "I WILL do that" and you find yourself doing it. (Neil)

This intrinsic dimension was also evidenced as a predilection to be, and feel, “close to the sky” (Aurora):

I lived in a flat... it was an under construction and ... all the windows [had] this mesh... felt like you were like in a prison, like in a cage and the sky was just very obstructed... that feeling of being so closed off from the sky... from day one I felt like very oppressed by that feeling of like not being close to the sky. (Daphne)

This predilection influences significant life choices, including where to live, with three participants prioritising hilltop and rooftop properties to be and feel closer to the sky.

Aurora’s apartment has rooftop access, facilitating daily sky watching and “was my main feature why I chose this flat”, whilst Daphne chose to:

...Live [on] top of the hill, so you kind of feel like you're really close to the sky... I've noticed before in places where I've lived ... when I feel close to the sky or not, and I do get a lot from that feeling.

In addition to being intrinsically rewarding, looking up is also self-regulating.

Sub-theme 1.3: 'I will go and seek it out'

The participants’ accounts suggest looking up is a self-regulating activity, associated with self-care, and is both reactive – “if I’m not feeling great, or I’m a little bit low then I will actually go and seek it out” (Neil) – and proactive, as powerfully described by Cielo:

I used to work for four years at a therapy clinic ... doing psychotherapy on a volunteer basis... for women mostly who'd been abused and ... if I was having a day where I feel,

oh, I'm a little stressed or... I know I've got difficult clients coming, I would purposefully go 'right, take five minutes to pause' and go and look at the sky first. And that would help me feel better.

What is being regulated and with what aim? The participants' accounts suggest the answer may be linked to wellbeing.

Theme 2: 'This is gonna make me feel better'

I have come to understand that when I look at the sky, I know I will feel calmer in my body ... so is there a desired outcome? Yes, because I know there will be an outcome ... I know that if I need to feel calm, or... I need to go and find a window that looks up. (Cielo)

Looking up was described as a multidimensional experience, enhancing psychological wellbeing and ameliorating physical discomfort. In addition to feeling calmer, participants experienced a greater sense of connectedness, a more expansive sense of perspective, and became present in the moment. They felt grounded by the sky.

Sub-theme 2.1: Grounded by the sky

Two participants described feeling 'grounded' by the sky, a nebulous concept that proved elusive to pinpoint, comprising elements of calm, awe, mindfulness, perspective and psychophysiological wellbeing:

It resets your worries, calms your mind... that kind of 'wow' ...grounds you in that kind of way... it brings some reality back to your concerns...that's what I would call grounding. It...puts in perspective what's going on. (Neil)

Being grounded by the sky also has striking parallels with meditation and mindfulness practice – deep breathing, feeling present in the moment, calmness in the body and mind:

When you're truly in the moment and you realise you're looking up to the sky... being in the moment...it's very moving. (Aurora)

[Looking up] made me feel relaxed and made me notice the other senses... I sat, closed my eyes, I breathed in... noticing the air and... the sensations. (Daphne)

In addition to feeling grounded by the sky, a further mindfulness-related phenomenon experienced by the participants was feeling connection in solitude.

Sub-theme 2.2: Connection in solitude

Participants experienced a deeper sense of connectedness, internally and with the world around them, predominantly when alone. Through an expansive sense of perspective, participants transcended immediate, insular concerns by recognising themselves as being part of a ‘bigger picture’:

It makes me feel really connected to the world.... when you look up you look up you just realise [pause] there's so much, but it's all out there. (Cielo)

Paradoxically, this sense of connectedness appears to blossom in solitude:

It's nice when you think I'm looking at the moon and someone else is looking at the moon... I think it's quite a unifying, um, unifying thing and yeah, it just kind of... brings you comfort I think in moments of solitude. (Daphne)

In solitude, participants experienced an inner sense of connection and coherence because the experience was free from judgement: When looking up, they could be themselves:

...A sense of coming back to my inner core like coming back to my authentic self... it brings me back to my values or what's important for me. (Aurora)

Connection was also experienced as feeling closer to the natural world: Looking at the sky appears to be a conduit for ‘tuning in on nature’:

[Looking up is] nourishing for the soul... you're not closed in... just very... you know, closer to nature, which is I think my, my religion. So yeah, I would say that it brings me closer to my religion. (Daphne)

It is notable that the experience of looking up was significantly less enjoyable and efficacious for the majority of participants (n=3) when instructed to do so during their interviews (with practical implications for potential PPI design), encapsulated succinctly by Neil:

I was thinking about what I would say... and therefore it made it kind of false... it completely took away the experience of looking up - the normal experience [and was] very different, just because it's something I'd been asked to do.

It might be logical to conclude that, over time, looking up would lose its effectiveness. Yet, remarkably, frequency does not appear to dampen its potency. The next theme may hold the key: looking up, it seems, never gets old.

Theme 3: 'Amazement. Almost every time.'

By embodying a paradox – “it always changes but it never changes” (Aurora) – the sky becomes an everyday opportunity to experience the extraordinary in the ordinary. “Like looking at a piece of art” (Cielo), the sky is a frameless window to the infinite and the impermanent, prompting existential questions about our place in the universe.

Sub-theme 3.1: Awe - The infinite and the impermanent

According to Neil, looking up is “awe-inspiring” and described his experiences kaleidoscopically as “humbling, amazing, calming, phenomenal”, resulting in feeling “amazement. Yeah. Almost every time”, an experience echoed by Cielo, who suggests:

It's about being in awe... when you can't quite believe something. And I think that's the general theme maybe of all of this... we understand the science behind it [but] have no control over it as humans, and I think that's pretty special.

Just as eyes are said to be the window to the soul, looking up is a window to the infinite and the impermanent – a feeling of infinite, limitless potential and possibility:

It's just a feeling of openness... and of possibility and potential... that feeling of like, you know, limitlessness... it could be overwhelming I guess, but it's not. It's very... comforting. (Daphne)

Looking up was a (sometimes poignant) reminder of the impermanence of all things, a call to action to savour each moment before it is gone:

The clouds were moving and yet I was still, and I really noticed... that even when we're still... life goes on... the universe would keep going on... I'm here and this is this moment... but it's going to keep going on. (Cielo)

In unison with the participants' more expansive sense of perspective, looking up prompted existential dialogue relating to their place in the universe:

It's phenomenal that we're here and we're in this universe... that's what I get almost every time I look up... going 'wow'. Of all the billions of inhabitable planets and millions of stars and everything and – this is us. This is where we are, this is what's going on and I've got my speck of a life on it, and so, yeah, kind of calming and awe-inspiring. (Neil)

Looking up appeared to stimulate an innate existential curiosity towards “what’s out there” (Cielo), occasionally surfacing poignant emotions. When asked what emotions came to mind when he thought about looking at the sky, Neil replied:

It can range from sadness that there’s only this speck of time to see what it’s all about – what the universe is all about, and where it’s gonna go – and that I’ll never see it. That I won’t see it – to... utter awe that it’s happening.

To summarise, looking up at the sky is an intrinsically rewarding, self-regulating activity, that helps the participants feel better. Being grounded by the sky encompassed being in the moment, instilling calm, connectedness, and an expansive sense of perspective. The sky is an awe-inspiring window into the infinite and the impermanent, stimulating an innate existential curiosity with the universe and their role within it. Looking up is “an absolute wonder” (Neil) and an everyday experience of the extraordinary in the ordinary, encapsulated beautifully by Cielo:

I’m trying to encourage my children to appreciate things in life that are free, that make you feel good, that not everything has to have a value that’s monetary. And this happens to be something that’s there every day. That for a few moments you can go, ‘wow, that’s pretty amazing. I don’t even know how that happens, but it’s happening.’

Discussion

The objective of the present study was to gain insights into the subjective experience of looking up at the sky, a prerequisite first step towards understanding if, and how, the sky augments wellbeing. In summary, the sky plays an important role in the lives of the participants; it is a valued relationship and a frequent, intrinsically motivated, self-regulating experience, conferring beneficial outcomes. Looking at the sky also imbues feelings of greater connectedness, to others and the natural world, alongside a heightened sense of perspective and awe. Challenges are re-evaluated with renewed clarity, their significance ameliorated through an existential realisation of their place in the universe, knowing that they too shall pass, like clouds, across the infinite, impermanent sky.

Aspects of individual experiences suggest possible links to noctcaelador (Kelly, 2003) and place attachment theory, defined as “the experience of a long-term affective bond to a particular geographic area and the meaning attributed to that bond” (Morgan, 2010, pp. 11–12). First, there is a sense of connection with the sky, often from childhood, which may be a

form of place attachment. Whilst place attachment in children correlates significantly with exploration of outdoor places (Korpela, Ylén, Tyrväinen, & Silvennoinen, 2009; Morgan, 2010), further study is required to understand if, and how, the sky facilitates place attachment. It is also unclear if the sky itself constitutes a *place*, as it does not fit conceptualisations of place within the extant literature (see Lewicka, 2011, for a review). Second, ‘feeling close to the sky’ was a determinant in where three participants chose to live (interestingly, only by those raised in the countryside). Third, participants described (directly and indirectly) experiencing absorption. And, fourth, there was a recurring theme of curiosity, especially in relation to existential questions relating to ‘our place in the universe’. Aspects of the participants’ experiences also deviated from noctcaelador: whilst three participants enjoyed aspects of night skies (predominantly celestial bodies like stars and the moon), none of the accounts suggest a specific attachment to night skies with most participants (n=3) instead expressing a predilection towards transitional times of day, specifically sunrise and sunset.

As posited earlier, looking up appears to be a self-regulating activity. Self-regulation is a goal-directed behaviour defined as the “self’s capacity for altering its behaviours” (Baumeister & Vohs, 2007, p. 115) but what is being regulated when participants look up, and what is their goal? The participants’ experiences suggest looking up at the sky is a form of emotional regulation, experienced as a sense of greater calm, clarity and perspective. The defining characteristic of emotion regulation is the “activation of a goal to influence the emotion trajectory” (Gross, 2015, p. 5). Although the outcome of looking up is unknown beforehand, invariably it *does* produce an outcome, and when the goal – regulation of one’s own emotions – *is* the outcome, looking up at the sky may be a form of intrinsic emotion regulation (Gross, 2015).

Manipulating our surroundings is another effective form of self-control, as posited by the process model of self-control (Duckworth, Gendler, & Gross, 2016), achieved by successfully targeting one or more stages in a sequential cycle: situation, attention, appraisal, and response (the earlier in the cycle, the more effective the outcome). Looking up constitutes an example of this type of self-control; participants removed themselves from unhelpful situations or states by shifting their attention towards the sky, resulting in more constructive appraisals, and resulting in an efficacious response.

Figure 2 represents one of Neil’s experiences using the process model of self-control:

The theme of looking up as a ‘need’ and its intrinsic nature highlight parallels with Self-Determination Theory (SDT), which posits our natural inclination is towards psychological growth, manifest as intrinsic motivation to engage in activities that satisfy three fundamental psychological needs: autonomy, competence and relatedness (Ryan & Deci, 2000.)

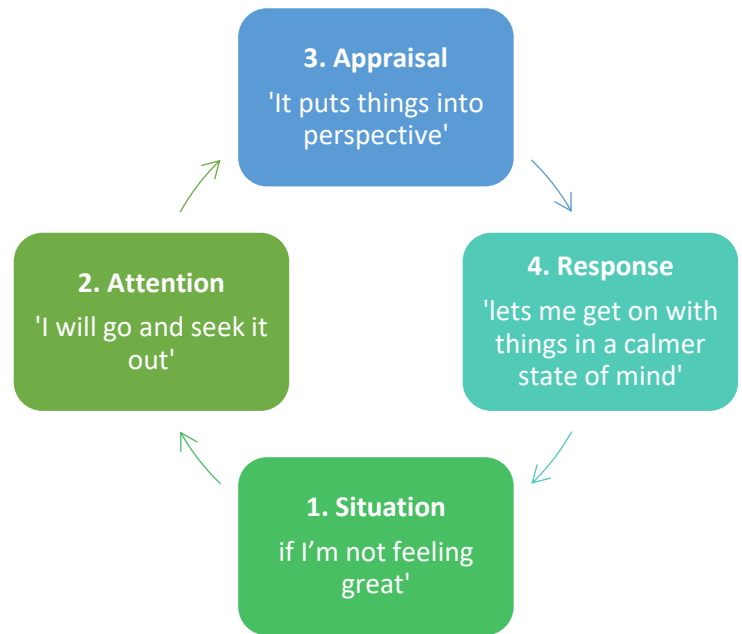


Figure 2. Looking up as situational self-control, using the process model of self-control (Duckworth et al., 2016).

Looking up is autonomous, with participants expressing a predilection to do so when alone. There is also a derived sense of competence from

looking up, manifest as enhanced self-efficacy, suggesting links to social cognitive theory, where self-efficacy is a primary motivational driver (Bandura, 1991). Looking up also engages the psychological need for relatedness, through feeling more connected interpersonally and intrapersonally with the wider world and the universe. Significantly, looking up appears to satisfy all three SDT needs simultaneously, which has practical implications for interventions designed to augment motivation, efficacy, and personal growth.

Looking up may be an act of passion, in line with the Dualistic Model of Passion (DMP) proposed by Robert Vallerand and colleagues, with passion defined as:

...a strong inclination toward a specific object, activity, concept or person that one loves (or at least strongly likes), highly values, invests time and energy in on a regular basis, and that is part of one’s identity. (Vallerand, 2015, p. 42)

The DMP posits passion as a key motivational driver for engaging in personally meaningful activities and as an essential dimension of wellbeing. Passion is the result of a process of ‘internalisation,’ whereby an activity, person, object or belief becomes aligned with one’s identity, with the nature of the internalisation process determining whether the passion is ‘harmonious’, resulting in adaptive outcomes, or ‘obsessive’, resulting in maladaptive

outcomes (Vallerand, 2015). Individuals engaged in harmoniously passionate activities have full autonomy over how often, and to what extent, they engage in it, as opposed to obsessive passion, where the activity controls the individual. Harmonious passion appears to align with the experiences of all four participants, which may provide insights into why they described experiencing positive emotions, self-efficacy, persistence and enhanced psychophysiological wellbeing. However, further research is required to determine the extent to which the experience of looking at the sky is linked (correlational / causal) with the construct of passion.

The experience of looking up has striking parallels with meditation and mindfulness practice, the latter defined as “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally, to the unfolding of experience moment by moment” (Kabat-Zinn, 2003, p. 145). Mindfulness usually incorporates both focused attention, “sustaining selective attention moment by moment on a chosen object”, and open monitoring, being “attentive moment by moment to anything that occurs in experience without focusing on any explicit object” (Lutz, Slagter, Dunne, & Davidson, 2008, p. 168), both of which were present in the participants’ accounts, their initial focus on the sky giving way to a broader sense of awareness, perspective and connectedness as part of a ‘bigger picture’. The Self-Awareness, Regulation, and Transcendence (S-ART) theoretical framework aligns closely with central themes (in brackets) in this study: self-awareness (mindfulness, perspective); self-regulation (calm); and self-transcendence (connection, awe). Mindfulness positively correlates with enhanced subjective well-being, behavioural regulation and reduced psychological symptoms and emotional reactivity (Keng, Smoski, & Robins, 2011) all of which surfaced, to varying degrees, in this study. The participants’ experience of *connection in solitude* is also a phenomenological dimension of mindfulness (Adair, Fredrickson, Castro-Schilo, Kim, & Sidberry, 2018).

Extant research on nature and wellbeing is often predicated on an assumption that people will use natural spaces they have access to, and derive beneficial effects from those interactions (Bell, Phoenix, Lovell, & Wheeler, 2014). As highlighted earlier, this is increasingly not the case, with the frequency and duration of time spent in natural environments decreasing, particularly in industrialised nations, compounded by the increasing pervasiveness and prevalence of screen time, especially for children (Rideout, Foehr, & Roberts, 2010).

Looking up at the sky could have significant practical efficacy by promoting wellbeing in areas without easy access to natural space, and as an easy-to-use intervention for introducing more frequent connection with nature (and its corollary beneficial effects) into one's day.

Looking at the sky appears to correlate with: the affective dimension of Subjective Wellbeing and PERMA; self-acceptance, positive relationships, autonomy and environmental mastery within PWB; and engagement, relationships, meaning and accomplishments in PERMA. However, a potentially more significant correlation with wellbeing is posited by *chaironic wellbeing*, defined as “feeling blessed and fortunate because of a sense of awe, gratitude, and oneness with nature or God” (Wong, 2011, p. 70). Chaironic wellbeing represents the “existential spiritual pathway to happiness’ and requires a willingness to be mindful, attuned to ‘transcendental reality’ and is typically associated with ‘peak experiences, mindful meditation, and transcendental encounters’ (2011, p. 70). Chaironic wellbeing is theoretical, with a virtual absence of empirical research to validate its claims, as acknowledged by the author (2011), however the experience of looking up has striking parallels with this conceptualisation of wellbeing, so could provide fertile opportunities for further *skychology* research.

Experiencing awe, defined here as “the experience of humility and wonder – adventure – toward living” (Schneider, 2017, p. 103), was a central theme in the participants’ accounts, with striking similarities to Kirk Schneider’s phenomenological studies of awe. His identification of six ‘lenses’ through which participants cultivate a sense of awe featured prominently in the present study: (1) an acute awareness of the passing nature of time; (2) attunement to wonder and surprise; (3) the realization of a cosmic context to everyday experiences; (4) perception of the intricacy and subtleties of life; (5) the experience of being deeply, emotionally moved; and (6) an appreciation for solitude (Schneider, 2009). Similarities between the participants’ experiences of looking up and Schneider’s phenomenological ‘lenses’ are significant and further research is recommended.

In response to recent calls for more qualitative and mixed-methods studies of awe (Schneider, 2017), *skychology* may offer a rich, practical means to deepen our phenomenological understanding of awe, whilst the participants’ experiences could have significant implications for practice. Intentional interactions with the sky could be used to augment interventions designed to impart the beneficial effects of awe, enhanced wellbeing, physical health, social

connectedness, prosocial attitudes and expanding cognitive repertoires (Chirico & Gaggioli, 2018). Before concluding this discussion, let us return to the distal goal of skyology, by evaluating the potential efficacy of looking up as a PPI.

Positive activities boost positive emotions, thoughts, behaviours, and needs satisfaction, all of which enhance well-being. PPIs are most effective when features of the person (motivation, effort, efficacy beliefs, baseline affective state, personality, social support, demographic factors) optimally fit with features of the activity (dosage, variety, sequence, social support) (Lyubomirsky & Layous, 2013). Research suggests an optimal “person-activity fit” (2013, p. 58) is more likely when the intervention is self-concordant and intrinsically motivated (Thompson, Peura, & Gayton, 2015).

The participants’ experiences suggest looking up is conducive to an optimal person-activity fit: it is effortless, intrinsically motivated (with reduced effectiveness when instructed to look up), infinitely fascinating, requires little social support (whilst enhancing prosocial attitudes), and invariably results in desired wellbeing outcomes. Finally, a significant obstacle to continued engagement with PPIs is ‘hedonic adaptation’ as the “rewards of positive activities dissipate with time” (Lyubomirsky & Layous, 2013, p. 61). However, the participants’ accounts suggest looking up negates the effects of the hedonic adaptation. Despite being an everyday activity over a lifetime, its potency remains undiminished; the experience of awe may hold the key. Within the context of the person-activity model, looking up appears to have efficacy as an effective, enduring PPI.

Limitations

Whilst this study represents a significant first step towards deepening our understanding of the phenomenological experience of looking up at the sky, it has limitations which, if addressed, will enhance the effectiveness of future research. First, the small, homogenous sample, and its relatively narrow ethnic and socio-economic composition (Caucasian, born-and-raised in industrialised European countries) limits the transferability of findings to wider populations. Future research comprising greater socio-economic and cultural diversity is recommended. Second, this study represents participants’ perceived correlations between looking up and wellbeing, not causality; quantitative and qualitative studies are required to explore the findings posited here. Third, all participants self-reported as having a fascination

with the sky, which could indicate the presence of a trait, with implications for practice and theory. Future research is required to establish whether a trait is present, and the extent to which perceived effects and benefits of looking up are trait-reliant (crucial to the effective development of skychology PPIs). Finally, this study represents a snapshot in time. Longitudinal studies would illuminate the temporal efficacy of looking up across life stages.

Impact and Future Direction

The participants' experiences suggest looking up at the sky: (1) integrates easily into daily life; (2) imbues one with an almost immediate sense of calm; (3) brings a renewed sense of clarity and perspective; (4) augments intrapersonal and interpersonal connectedness; (5) is an omnipresent conduit to the experience of awe; and (6) augments psychological and physiological wellbeing. The impact – and practical implications – of such an experience to enhance the efficacy of interventions across an extensive range of clinical and non-clinical populations are potentially significant. The experience of looking up could be operationalised to: enhance the quality of person-centred interventions predicated on open, non-judgemental spaces (e.g. coaching, therapy, and counselling sessions); ameliorate the effects of rumination by experiencing nature and inducing mindful self-focus (Bratman, Daily, Levy, & Gross, 2015; Huffziger & Kuehner, 2009); augment the efficacy of mindfulness interventions (Keng et al., 2011); support psychological wellbeing in children and adolescents as an emotional self-regulation technique (van Genugten, Dusseldorp, Massey, & van Empelen, 2017); enhance the effectiveness of metacognitive learning approaches for rehabilitation following traumatic brain injury (Ownsworth, 2015); reduce stress and augment positive affect during issue resolution and negotiation (Jäger, Loschelder, & Friese, 2015); ameliorate cognitive dysfunction and enhance the wellbeing of prison populations by providing an 'always on' conduit to natural space (Meijers, Harte, Jonker, & Meynen, 2015); support individuals coping with chronic pain through emotional self-regulation (Van Damme & Kindermans, 2015); and help adolescents overcome substance abuse through emotional self-regulation (Stanis & Andersen, 2014). Whilst further research is required to establish a robust evidence base, the potential efficacy of skychology PPIs may be as far-reaching as the sky itself.

Conclusion

For the participants, looking up at the sky is an experience of the extraordinary in the ordinary – a constant companion that grounds, connects, amazes, and makes life feel better. The participants' experiences offer a fascinating glimpse into the potential of skychology to positively impact people's lives all over the world, and this study represents a significant first step towards deepening our understanding of the phenomenological experience of looking up at the sky, and the potential for intentional interactions with the sky to be operationalised as PPIs to enhance wellbeing. In the face of extraordinary global challenges, let us seek inspiration from the ordinary. The challenges to wellbeing are great, but so too is the response: the future of wellbeing is starting to look up.

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Appendix A

Interview Schedule

*Clean Language question

1. And looking up at the sky is like what?*
2. And is there a relationship between [metaphor 1] and [metaphor 2]?*
3. When you look up at the sky, what would you like to have happen?*
4. Is there a desired outcome, if so, what?
5. To what extent is looking up at the sky deliberate or spontaneous?
6. What is your earliest memory of looking up at the sky?
7. How does looking up at the sky affect your life?
8. Is there a relationship between looking up at the sky and your wellbeing?
9. How often do you look up at the sky?
10. Are there any prerequisite conditions?
11. To what extent is the experience of looking up at the sky consistent?

Other Prompts: *What else can you tell me about that? What is the significance of that? Can you elaborate further? Can you give more some specific examples?*

Appendix B

Participants' Main Themes

Name	Theme 1	Theme 2	Theme 3
Neil	Awe	Calming, grounded	Perspective - our place in the universe
Cielo	Wellbeing	It's very important to me	Awe
Daphne	Nurturing / Supporting	Connection in Solitude	Brings me closer to my religion
Aurora	Perspective	Beautiful Infinity	Self-regulation

Appendix C

Master List of Super-ordinate Themes

1. It's important to me	2. This is gonna make me feel better	3. Amazement. Almost every time.
Actively seeking out the sky (frequent, intrinsic, self-motivated behaviour)	Calming	Awe
Valued - like a relationship	Connection	Infinite and impermanent / beautiful infinity
Starts in childhood	Perspective	
Significance in living space / environment	Present in the moment	

Appendix D

Theme Prevalence Table

Super-ordinate / sub-themes	Neil	Cielo	Daphne	Aurora	Prevalence
1. It's one of my needs	Yes	Yes	Yes	Yes	100%
1.1 Constant Companion	No	Yes	Yes	Yes	75%
1.2 Every day. Every day	Yes	Yes	Yes	Yes	100%
1.3 I will go and seek it out	Yes	Yes	Yes	Yes	100%
2. This is gonna make me feel better	Yes	Yes	Yes	Yes	100%
2.1 Grounded by the sky	Yes	Yes	Yes	Yes	100%
2.2 Connection in solitude	Yes	Yes	Yes	Yes	100%
3. Amazement. Almost every time.	Yes	Yes	Yes	Yes	100%
3.1 Awe: The infinite and the impermanent	Yes	Yes	Yes	Yes	100%