Seed and Soil - The influence of employee biospheric values and perceived organisational support on the engagement in environmental organisational citizenship behaviour

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Abstract

Climate change presents one of the most urgent and difficult challenges of modern times, requiring mobilisation at every level of society to mitigate it. Organisations play an important role in this through strategies and policies aimed at increasing its overall sustainability, yet the success of any organisation's initiatives often depends on its employees. The present research explores the interplay between employees' biospheric values (BV) and perceived organisational support (POS) and their joint role in fostering environmental organisational citizenship behaviour (OCBE). We predict that an employee's strong BV are positively related to OCBE, consistent with Schwartz's theory of basic human values. We further predict that the relationship between BV and OCBE is moderated by POS, such that the strength of the relationship between BV and OCBE depends on POS. To test this, we used a cross-sectional survey using a convenience sample. Results showed no support for the hypothesised relationship between BV and OCBE but do however show a strong positive relationship between BV and OCBE, under high POS, such that the association between BV and OCBE is stronger, when POS is higher. This undergirds the idea that POS may partially bridge the value-action gap. Findings highlight the critical role of contextual factors in the manifestation of personal values in the workplace.

Keywords: biospheric values, perceived organisational support, OCBE, value-action gap, sustainability, organisational climate, pro-environmental advocacy

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For decades now, the world has been imminently talking about climate change, making it a forefront of global discussions (Maslin, 2021). Scientific leaders overwhelmingly show that our planet is changing at an alarming rate (IPCC, 2023). We are experiencing natural disasters (Easterling et al., 2000), rising sea levels (Ekwurzel et al., 2017), the accelerated spread of diseases (Van de Vuurst & Escobar, 2023), a loss of natural resources and biodiversity (Sparey et al., 2023). Worldwide, scientists have reached consensus that a 2 degree increase in global temperature above pre-industrial levels marks an important threshold in the climate crisis (Armstrong McKay et al., 2022; Hansen et. al, 2016; United Nations, 2015). Many describe this increase as a 'point of no return' (Aengenheyster et al., 2018; IPCC, 2018), a point where self-perpetuating global cascading effects will profoundly change life how we know it today (Lenton et al., 2019). An increase that at the current rate, no longer seems implausible (Sognnaes et al., 2021; WMO, 2024). Additionally, recent political developments like newly elected US president Trump signing executive orders - again - withdrawing from the Paris Agreement (The White House, 2025) further highlight the urgency of immediate and significant action to circumvent irreparable damage to the environment. We stand at a pivotal time where our next steps could determine the reality of future generations and of our planet (IPCC, 2023). Collective action is needed to maintain our planet's livability (World Economic Forum, 2024)

As one such a sector, organisations and corporations have been identified as major contributors to emissions and overall pollution of the environment. To illustrate this in numbers, since the Paris Agreement came into effect in 2016, just 57 fossil fuel and concrete companies have been found to be responsible for almost 80% of global CO2 emissions

(InfluenceMap, 2024). These findings are alarming, highlighting the major role organisations play in advancing climate change. What's more, the UK's top 10 food companies (e.g. Nestle & Coca Cola) produced more carbon emissions in 2022 than all global air travel in the same year (Bite Back 2030, 2024). This amount also surpasses all carbon emissions produced by the UK through all activities in 2022 (Bite Back 2030, 2024). Notably, almost half of the 100 largest privately owned companies and firms have not set any emission reduction targets for themselves, insufficiently addressing their carbon emissions and potentially leading to higher pollution levels (Net Zero Tracker, 2024). Large corporations are amongst the biggest contributors, yet businesses of all sizes have the capacity to do better in terms of sustainability. Smaller businesses and organisations constitute the biggest market size and as such also play a significant role in environmental degradation through pollution and uneconomic energy usage (Madrid-Guijarro & Duréndez, 2024), and inept waste disposal systems (Derhab & Elkhwesky, 2022), to name just a few. Organisations of all sizes thus play a crucial role in the race against climate change and in making positive change towards the prevention of irreversible climate damage. However, an organisation is often said to only be as strong as its employees (Muller et al., 2018). Research shows that lasting environmental change within organisations often depends on encouraging all employees of the entire organisation to actively contribute and voice their ideas (Baykal & Divrik, 2023; Ispiryan et al., 2024). Mobilising motivated employees has the power to initiate sustainable organisational change and contribute to a more environmentally responsible future (Porter & Kramer, 2011).

The present paper aims to investigate how employees that value the protection of the planet might be more likely to advocate for sustainability in the workplace and how this depends on how generally supportive they perceive their organisation to be. Understanding under which conditions employees are most likely to speak up and suggest sustainability

changes at work is imperative for driving change from within, leveraging the insights from those who know where to compromise and prioritise sustainability.

Biospheric Values

Individual values have been theorised to play an important role in driving behaviour (Schwartz, 1992, 2012). In his theory of basic human values, Schwartz (1992) refers to values as motivators for behaviour. He suggests that everybody holds a multitude of values, each assigned varying degrees of importance. The values most important to a person are said to subsequently guide that person's decision-making and behaviour (Schwartz, 1996). More specifically to sustainable behaviour, research found that people holding strong values regarding the protection of the planet were more likely to behave pro-environmentally (Nordlund & Garvill, 2002; Bouman et al., 2021). Pro-environmental behaviours (PEB) are behaviours harming the environment as little as possible or even benefiting it (Steg & Vlek, 2009). In the context of PEB, biospheric values (BV) seem to play a significant role (De Groot & Steg, 2009). Biospheric values reflect a key concern for the biosphere and ecosystem as a whole (De Groot & Steg, 2008). Additionally, research has shown that people with strong BV internalise their value orientation as part of their self-identity and thus engage in PEB to act in line with their perceived self-concept (Gifford & Nilsson, 2014, Wang et al., 2021). Within organisations, employees with high BV were found to engage in significantly more PEB, such as voluntarily participating in sustainability initiatives at work or supporting their organisation in achieving its sustainability goals (Sampene et al., 2023).

In short, BV could mark an interesting starting point in propelling sustainable change within organisations by making use of employees's values to kickstart or further their organisation's journey to becoming more sustainable.

Value-Action Gap

One might assume that individuals who prioritise the protection of the planet will consistently engage in pro-environmental action. While there has been some support for this assumption (De Groot & Steg, 2008; Schwartz, 1992), research indicates that it is incomplete. Oftentimes, and especially so with PEB (Franco & Ghisetti., 2022), BV do not necessarily and unconditionally lead to corresponding behaviour (Tavri, 2021). The relationship between the two seems more nuanced and complex than Schwartz (1992) previously anticipated. Researchers refer to this phenomenon as the so-called *value-action gap* (Blake, 1999; Pickett-Baker & Ozaki, 2008). This gap suggests that other factors are at play influencing the relationship between BV and PEB (Ajzen & Fishbein, 1980; Kollmuss & Agyeman, 2002). Research supports and extends this idea by showing that a person's BV and PEB are only indirectly associated, pointing to the existence of other factors influencing the seemingly nuanced relationship between the two (Ateş, 2020). Many reasons exist as to why someone would not act in accordance with their BV. As one of the first to explore the pro-environmental value-action gap, Blake (1999) defined three broad categories of barriers that could inhibit PEB. The first kind he described are individual barriers, defined as an individual's attitudes or the degree to which they care about the environment at all. Accordingly, if a person does not value environmental protection, they might be less likely to engage in PEB. Secondly, Blake (1999) claims responsibility barriers to hinder PEB. Responsibility barriers manifest when a person believes it is not their responsibility to act pro-environmentally. They evaluate their own behaviour as insignificant or inefficient in bringing about meaningful pro-environmental change. Lastly, Blake (1999) finds practicality to be a barrier to PEB. By practicality, he means a person's lack of time, money or information. As plausible as this seems, Blake (1999) largely overlooked contextual and environmental forces, over-emphasising the role of individual barriers. Research on determinants of PEB has found contextual factors to play an important role in promoting or

inhibiting PEB (Blankenberg & Alhusen, 2019). Specifically in the workplace, contextual factors like organisational culture and climate seem to play a pivotal role in influencing behaviours (Hartnell et al., 2011; Schneider et al., 2012) such as proactive behaviours like taking initiative to act sustainably at work (Norton et al., 2014) or employee green behaviours which constitute scalable behaviours contributing to the organisation's sustainability goals (Ones & Dilchert, 2012). A more comprehensive examination of contextual bridging factors will be provided in the following sections.

Environmental Organisational Citizenship Behaviour (OCBE)

Environmental organisational citizenship behaviour (OCBE) can be defined as "individual and discretionary social behaviors that are not explicitly recognized by the formal reward system and that contribute to a more effective environmental management by organizations" (Boiral, 2009, p.223). They represent a type of extra-role behaviour aimed at increasing an organisation's overall sustainability standing. As an extra-role behaviour, they are not part of an employee's formal job description or job duties but rather make up voluntary behaviours that help an organisation thrive, mainly because they contribute highly to the organisation's overall performance and market competitiveness (Podsakoff et al., 2000). Taken together, OCBE has been shown to be an important contributor to making an organisation more 'green' (Azam et al., 2022) and increasing an organisation's overall sustainability performance (Jankelová et al., 2024).

Perceived Organisational Support (POS)

The interplay between personal and contextual factors can be understood as a 'seed and soil' relationship, as illustrated by Walton et al. (2020). Even a person with strong BV (seed), may only be compelled to act pro-environmentally under the right circumstances (soil). As previously noted, contextual factors have been found to promote PEB in the

workplace (Hartnell et al., 2011; Schneider et al., 2012). More specifically, past research has found organisational and work climate to matter tremendously in making employees feel comfortable enough to engage in voluntary work behaviours (Amponsah-Tawiah et al., 2020; Wang & Yen, 2023). As such, organisational support has been found to significantly predict employee efforts to act pro-environmentally (Zhang et al., 2024). Eisenberger et al. (2020) define perceived organisational support (POS) as the extent to which employees believe the organisation they work for values their contributions and cares about their well-being. POS plays a crucial role in making employees feel heard and their contributions at work respected (Eisenberger et al., 1986). Consequently, POS has been linked to employees' willingness to engage in voluntary extra-role behaviours (Chernyak-Hai et al., 2024). Moreover, employees who perceived their supervisors to be supportive were more likely to engage in eco-initiatives at work, which researchers define as "any action taken by an employee that she or he thought would improve the environmental performance of the company" (Ramus & Steger, 2000, p. 606; Ramus & Killmer, 2007). In a study examining factors that made women more or less likely to speak up about gender-related discrimination at work, POS played an important role in making the women studied more likely to bring up their concerns with management (Ashford et al., 1998). Correspondingly, pointing out an organisation's lack of investment in sustainable practices - a concern that could be considered equally sensitive - might thus be similarly influenced by POS.

For many, engaging in extra-role behaviours, like speaking up about a cause you care about, entails taking a level of risk (Parker et al., 2010). Employees seem to need to feel secure and supported at work; otherwise, the perceived costs of speaking up, like the possibility of skepticism or negative feedback from coworkers and supervisors might outweigh the likelihood that they will contribute through OCBE (Parker et al., 2010). Furthermore, supported and secure employees typically fall higher on organisational

identification (Kazmi & Javaid, 2022). As a result, contributing to and advancing the organisation's success and performance becomes a core part of employees' identities, which in turn has been linked to greater efforts, such as extra-role behaviours, and improved overall performance (Liang et al., 2012; Liu et al., 2010). Hence, in a caring and secure work environment, employees' fear of potential negative consequences when speaking up may be alleviated. With regards to OCBE, crafting an environment in which employees feel secure and affirmed might have the power to materialise employees' strong BV into OCBE. High POS has been positively linked with extra-role behaviours like OCB by creating a sense of reciprocity between employees and employer (Eisenberger et al., 2001; Thompson et al., 2020) and by increasing employees' organisational commitment (Daly, 1999; Eisenberger et al., 2002; Thompson et al., 2020). This has been found not only to be of relevance for the general advancing of an organisation's sustainable status quo, but also to produce desirable externalities such as economic advantages, improved innovation, and increased organisational performance overall (Palmié et al., 2023).

Past research has repeatedly pointed out the importance of context in driving PEB, so much that neglecting its influence may lead to incomprehensive conclusions (Stern, 2000; Xing et al., 2022). By modifying contextual factors, we could activate or even boost desired behaviours in the workplace (Schultz & Mertens, 2024). Like a seed in the right soil, a supportive work climate might amplify the effect of BV on OCBE and make employees more likely to translate their strong biospheric values into action at the place where they spend almost a third of their lifetimes (Office for National Statistics [ONS], 2025).

It is important to note that in the present research, we make the conscious decision to investigate how POS, not perceived organisational support toward the environment (POS-E) may affect OCBE. POS-E was first introduced by Lamm et al. (2015) in an attempt to identify undiscovered correlates of OCBE. POS-E refers to "the specific beliefs held by

employees concerning how much the organization values their contributions toward sustainability" (Lamm et al., 2015, p. 209). Their research determined POS-E to be significantly and positively associated with OCBE. This connection is well established (Bhatnagar & Aggarwal, 2020; Harrach et al., 2020) and unsurprising. Instead, we take a broader approach, investigating whether POS more generally could drive OCBE, particularly in organisations that do not already prioritise environmentalism. Identifying mechanisms that encourage employees to voice sustainability concerns could be key to enabling even previously non-environmentally focused organisations to implement sustainability practices and shift their focus to more environmentalism.

Research Question and Hypotheses

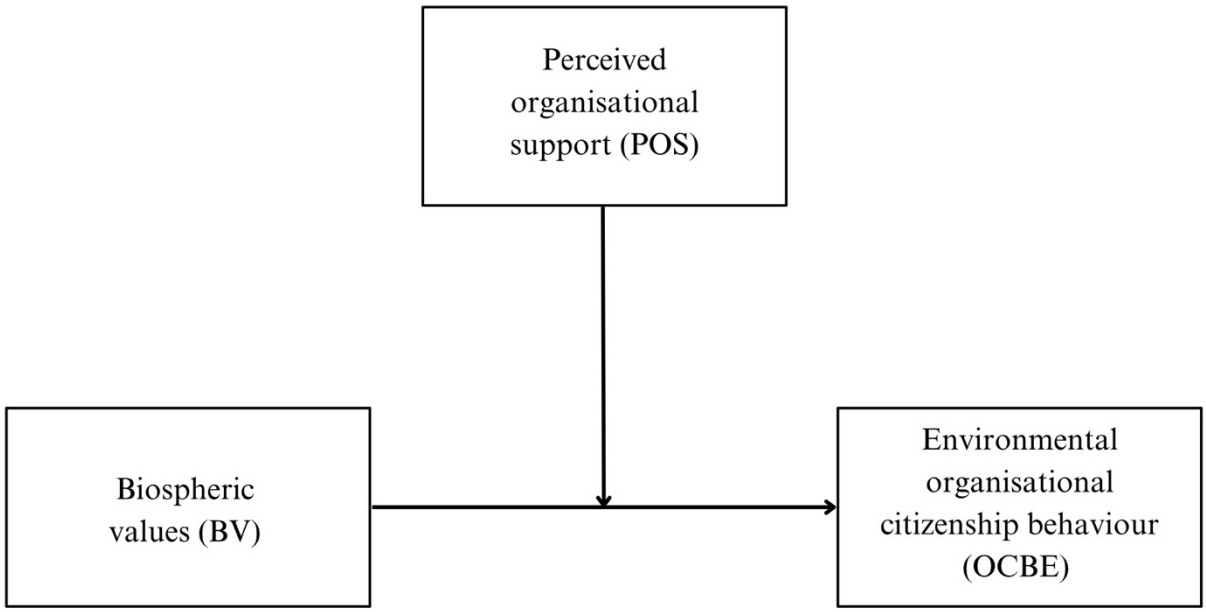
In the present research we aim to investigate the relationship between employees' BV and OCBE and test their famously hypothesised association (Schwartz, 1992; 1996). Adding POS as a contextual moderator variable, we test whether it might bridge the value-action gap and build upon the relationship of BV and OCBE. Our objective is to examine whether POS affects the strength of the relationship between employees' BV and OCBE. Therefore, we hypothesise the following:

H1: Individuals with strong BV are more likely to engage in OCBE (see Figure 1).

H2: The relationship between stronger BV and OCBE is moderated by POS, such that the effect of BV on OCBE is stronger when POS is high (see Figure 1).

Figure 1

Pathway model



Methods

Research Design & Procedure

We conducted cross-sectional research using a questionnaire that was distributed via a poster including a qr-code and put on the blackboard of the Social and Behavioural Sciences Faculty of the University of Groningen. Further, a link to the survey was sent out to researcher's immediate social circle encompassing friends, family and university group chats on WhatsApp. Lastly, we recruited participants by distributing flyers in cafés and in university buildings around the city. On the basis of a set of questions developed by the Ethics Committee of the Faculty of Behavioural and Social Sciences at the University of Groningen (EC-BSS), the study was submitted to the fast-track procedure and therefore exempt from review. This research was conducted in the context of a Psychology Bachelor's thesis course. A survey using a convenience sample was chosen for the research design. The survey was administered in English and Dutch to increase accessibility. Participation was voluntary, but an incentive for recruitment was used, which consisted of five mastercard/ visa gift cards valued at 30 euros each (see Figure A1). Participants were given the option of

entering a “lottery” to win one of said gift cards, by clicking on a link to a google forum where they could enter their email address which were later used to randomly draw five winners. The Survey was created and administered using Qualtrics (https://www.qualtrics.com). Before entering the questionnaire, participants were presented with some information about the research and a consent form, where participants were given the option to either consent to participating in the research or not. Data collection was ensured to be entirely anonymous and stored securely in Qualtrics, with only the researchers having access to their data. The survey consisted of 87 items in total (excluding divider questions, consent questions, and demographics questions) of which 15 are relevant to the present research and assessed BV, POS and OCBE. The time to take the survey was estimated at 15 minutes. Participants took slightly longer than expected, with the median time spent taking the survey being 19.18 minutes. The mean time spent to take our survey was 225.7 minutes, which we hypothesise to have been caused by participants pausing their responses or leaving the survey tab open which then continued to record the time, regardless of actual engagement with the questionnaire.

Because this research served as a Bachelor thesis group course, other constructs were assessed simultaneously. These items shall be considered irrelevant to the present research and were thus excluded from further processing. Finally, participants encountered an attention check to verify whether they paid full attention during the survey and were subsequently asked to consent to the processing of their data. Further, respondents were given the opportunity to leave final comments regarding the survey and/or its content.

Participants

Prior to recruitment we conducted a Power analysis in G* Power (Faul et al., 2007; 2009). For our research to reach 80% Power, at an alpha level of $\alpha = .05$ and to be able to find a medium sized effect $d = .5$, 119 participants were found to be required. In total, 213

people participated in the study. After applying exclusion criteria established prior to data collection, we were left with a sample of 68 subjects which did not reach the sample size requirements set by the a priori power analysis. We excluded participants aged under 18 and participants that did not indicate to currently work at an organisation or business. Further, we excluded participants that did not complete all the questions relevant to the present analysis. Forty-two women (61.8%) and 26 men (38.2%) took part in the survey. Participants' ages ranged from 19 to 68 (M = 34.57, SD = 14.97), indicating a broad age range. As for language of administration, 49 people (72.1%) participated in our survey in English and 19 (27.9%) participated in Dutch. Participants were further asked to indicate the highest level of education they completed. Frequencies were as follows: Thirteen participants (19.1%) completed secondary school as their highest level of education (VMBO, MAVO, HVO, HAVO). Another four participants (5.9%) completed secondary vocational school (MBO). Sixteen participants (23.5%) achieved a higher professional education (HBO). Twenty-one people in our sample (30.9%) obtained a Bachelor's degree (WO) and another 13 participants (19.1%) received a Master's degree. Lastly, one person (1.5%) earned a Doctorate (PhD). Our sample proved to be largely diverse in educational background with more women than men participating.

Measures

The survey was set up to measure BV and how those relate to OCBE under POS. Items were constructed to measure BV, POS, and OCBE. Our survey was constructed using priorly validated items to accurately assess constructs.

Biospheric Values

The first part of the questionnaire assessed participants' BV, our independent variable, which was assessed using four items taken from the Environmental SVS (E-SVS) methodology (Steg et al., 2014), which is an adapted version of the Schwartz Value Scale

(SVS, Schwartz, 1994). Participants were asked to indicate how strongly the stated values represent guiding principles in their lives. A Likert scale was used ranging from -1 (opposed) to 7 (supreme importance), to do so. The items we used were “PREVENTING POLLUTION (protecting natural resources)”, “PROTECTING THE ENVIRONMENT (preserving nature)”, “RESPECTING THE EARTH (harmony with other species)”, “UNITY WITH NATURE (fitting into nature)”. Our items formed a reliable scale ($\alpha = .903$), so we computed their mean score and standard deviation ($M = 4.84$, $SD = 1.621$; $N = 67$; see Table 1). This shows that participants generally held moderate to strong BV.

Organisational Environmental Citizenship Behaviour (OCBE)

The second part of the survey assessed OCBE, our dependent variable, using the following three items: “I draw management's attention to activities or policies of my organisation that lead to wasted resources”, “I collaborate with colleagues and/or customers to limit the organisation’s negative environmental impact by reducing, reusing, or recycling resources”, “I put forward ideas to reduce my organisation's negative impact on the environment by reducing, reusing, or recycling resources”. Respondents were asked to indicate how frequently they engage in the stated behaviours in the context of the organisation they work at. This was measured using a 6-point Likert scale ranging from 0 (never) to 5 (frequently). As the items formed a reliable scale ($\alpha = .883$), we created a scale based on the mean of the items ($M = 1.746$, $SD = 1.341$; $N = 67$; see Table 1). On average, participants indicated they rarely engaged in OCBE.

Perceived Organisational Support (POS)

As for the third part of the questionnaire, we assessed POS, our moderator variable, using items taken from Eisenberger’s 8-item short measure of POS also referred to as Survey of Perceived Organizational Support (SPOS) (Eisenberger et al., 1997). Participants were asked to indicate to what extent they agree with statements about their organisation. We used

a Likert scale ranging from 1 (fully disagree) to 7 (strongly agree) to measure this. We used the following items to measure POS: “My organisation really cares about my well-being”, “My organisation strongly considers my goals and values”, “My organisation takes pride in my accomplishments”, “My organisation would forgive an honest mistake on my part”, “If I did the best job possible, my organisation would notice”, “My organisation cares about my opinions”, “Help is available from my organisation when I have a problem”, “My organisation tries to make my job as interesting as possible”. All items were found to form a reliable scale (α = .905), yielding a mean of 4.896 with a standard deviation of 1.099 (N = 67; see Table 1). This translates to participants perceiving their organisation to be only somewhat supportive.

Results

Preliminary Analysis

For the purpose of examining the relationships between BV, POS and OCBE and testing our hypotheses we conducted a multiple linear regression analysis. Prior to analysis and in order to assure sound conclusions from our analysis, we conducted assumption tests for regression. This includes checking for normality, linearity, homoscedasticity, outliers, independence, and multicollinearity. First, to ascertain normality, we consulted residual plots, indicating a relatively normal distribution (see Figures B1, B2, and B3). Second, with the help of the same residual plots, linearity can be assumed as all residuals follow a straight line (see Figures B1, B2, and B3). Third, homoscedasticity can be considered met as well, seeing that the residuals are spread out randomly in the scatterplot (see Figures B4, B5, and B6). Fourth, returning to the residual plots we found no apparent outliers to exist in our dataset (see Figures B1, B2, and B3). Fifth, independence of residuals can be assumed after running the Durbin-Watson statistic and finding a value of DW = 1.59 (see Table B1). Lastly, to

ascertain multicollinearity, we consulted the variance inflation factor from statistical output indicating no serious violation of multicollinearity (*VIF* = 3.80; see Table B2).

Initial descriptive analysis revealed the following correlations for our three variables: BV were found to be weakly correlated (Cohen, 1988) with OCBE ($r = 0.19$, $p = .065$). The association was found to be non-significant. BV also indicated a weak positive relationship (Cohen, 1988) with POS ($r = 0.16$, $p = .095$), but this association was also non-significant. Lastly POS showed a moderately positive association (Cohen, 1988) with OCBE ($r = 0.28$, $p = .011$), which was found to be significant, at $p < .05$. Hence, only POS and OCBE yielded a significant moderately positive relationship. All correlations can be found in Table 2 below.

Table 1

Descriptive statistics

Variable	M	SD	Min	Max
BV	4.82	1.62	0.25	7
OCBE	1.76	1.34	0	5
POS	4.89	1.09	1.75	7

Note. BV= Biospheric values, OCBE= Environmental organisational citizenship behaviour, POS= Perceived organisational support

Table 2

Pearson's correlation between variables

Variable	BV	OCBE	POS
BV	-		
OCBE	0.17	-	
POS	0.16	0.28*	-

Note. BV= Biospheric values, OCBE= Environmental organisational citizenship behaviour, POS= Perceived organisational support

*$p < .05$

Main Analysis

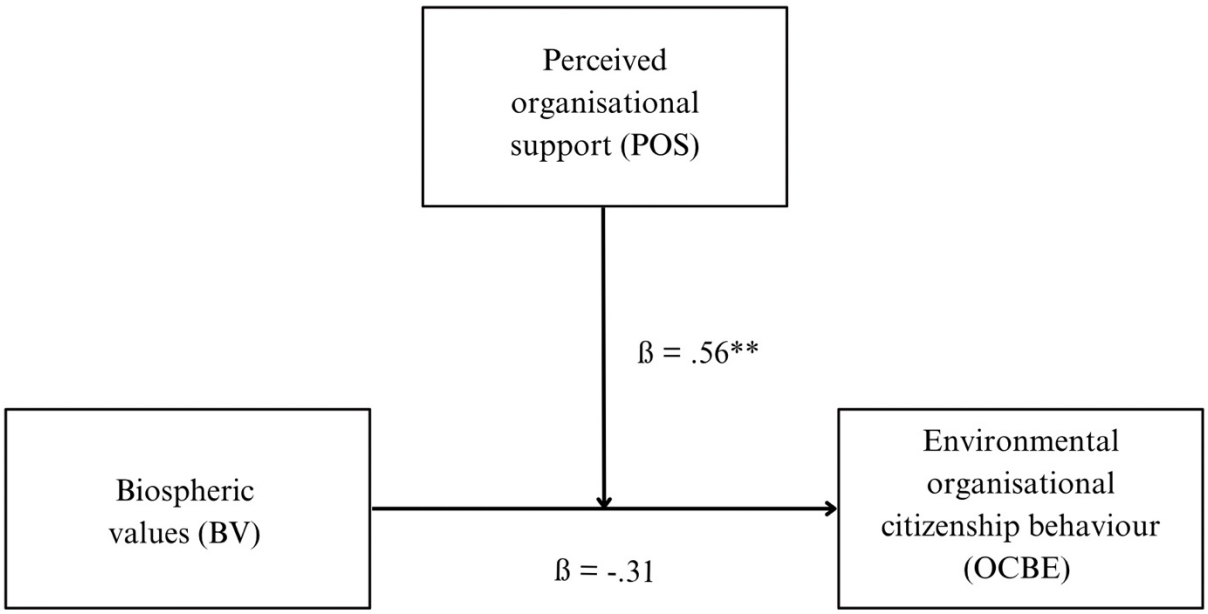
In order to test our hypotheses, we conducted a multiple linear regression analysis using statistical software Jasp (Jasp Team, 2024) and SPSS (IBM Corp., 2021). Overall findings revealed that our model was significant ($F(2,65) = 4.02$, $p = .012$), explaining 8% of the variance (*adjusted* $R^2 = .08$). This indicates that 92% of the variance in OCBE is explained by factors outside of the model we tested.

For Hypothesis 1, we specifically tested the relationship between BV and OCBE. The main effect of BV on OCBE was found to be non-significant, $\beta = -.31$, $t(65) = -1.34$, $p = .093$, 95% CI [-0.63, 0.12]. This enables us to conclude that no significant relationship between BV and OCBE was found, showing no support for Hypothesis 1.

As for Hypothesis 2, we tested the interaction effect of BV and POS on OCBE. We hypothesised that the effect of BV on OCBE is moderated by POS, such that BV would have a stronger effect on OCBE, when POS is high. We found support for this, $\beta = .56$, $t(65) = 2.43$, $p = .009$, 95% CI [0.01, 0.13], indicating a strong positive relationship between BV and OCBE when including our moderation term (BV*POS). This means that for every 1 unit increase in our interaction term (BV*POS), our dependent variable (OCBE) increases by .56. The overall model coefficients can be seen in Figure 2.

Figure 2

Pathway model with standardised coefficients



Note. $^{**}p < .01$

Discussion

In the present research, we intended to extend the literature on influencing factors of OCBE by combining two variables shown to independently be important to PEB and applying them to the organisational context, namely OCBE. Specifically, we tested whether BV and POS would affect OCBE in the workplace. We expected high employee BV to increase the likelihood of engagement in OCBE (H1) and further proposed that POS would strengthen this relationship, such that higher POS would positively affect the relationship between BV and OCBE (H2). Our analysis showed no support for Hypothesis 1, but did however find strong support for Hypothesis 2. Findings suggest a conditional effect of BV on OCBE, such that BV only significantly and positively influence OCBE, when POS is high. BV alone thus seem to not influence OCBE in a significant way. The low model fit (*adjusted* $R^2 = .08$) shows that BV and POS are not necessarily key predictors of OCBE.

Our results do not offer direct and inconsequential support for Schwartz's (1992; 1996) Theory of Basic Human Values, which suggests that BV guide corresponding behaviour, seeing that we only found a significant effect of BV on OCBE, when we introduced POS as a moderator variable to the model. However, findings are consistent with the value-action gap, as we found that other influencing factors are at play in producing a significant association between BV and OCBE. Findings show that feeling supported and valued at work positively influences the relationship between BV and OCBE. The low explained variance (8%), allows us to infer the complexity of the value-action gap, suggesting that other factors are at play in translating BV into OCBE. This extends previous research repeatedly pointing to the complexity of the value-action gap and its prevalence in environmental behaviour (Gifford, 2011; Kollmuss & Agyeman, 2002) Other factors seem to exist significantly influencing OCBE that need to continue to be explored and studied.

Theoretical Integration

As organisations face increasing pressure to incorporate sustainability goals into their organisational culture, understanding factors influencing OCBE - and specifically the role of personal values and contextual influences - is critical for fostering a work environment where employees feel supported in their pursuits to act on their BV and contribute to their organisation's overall sustainability through OCBE.

Our first hypothesis, which tested the relationship between BV and OCBE, was not supported. Previous research consistent with our findings found that BV are insufficient in making people choose fair-trade clothes over non-fair-trade options (Geiger & Keller, 2018). Nguyen et al. (2023) looked at whether informational appeals on different environment specific topics made people more likely to act on their BV. Their findings suggested that BV are insufficient in bringing about value-congruent behaviours. They further emphasise that people weigh the costs and benefits of acting on their values, even if they are strongly held

ones. As mentioned in the Introduction, OCBE may entail a level of risk for employees, which many might not be ready to take in workplace settings where they rely on their jobs for financial stability. This may explain why in the present research, BV alone was not found to be significantly associated with OCBE. However, inconsistencies in findings with regards to BV's influence on OCBE have been demonstrated. Personal BV have been repeatedly found to be a significant contributor of PEB in the workplace (Ruepert et al., 2017; Sampene et al., 2023). Another study conducted in Bangladesh found a significant effect of employee BV on PEB at work (Uddin et al., 2021). These findings are important, yet they disregard a crucial element that the present research accounted for. OCBE is a voluntary behaviour that questions the sustainable status quo of an organisation, which is a risky thing to do. PEB in the workplace constitutes behaviours that are mostly organisation-led and are thus approved or even expected, making them less personally risky for employees. This may explain why BV is more often directly associated with PEB rather than OCBE .Our findings thus show that not all PEB can be sufficiently explained and predicted by BV. With regards to OCBE, other factors seem to be important in combination with BV in order to increase OCBE.

Only when introducing POS as a moderator, in our second hypothesis, did we observe a significant positive effect of BV on OCBE, underscoring the importance of a supportive context. To our knowledge, no previous research exists investigating POS within the same contextual framework and constellation of variables as our study. Admittedly, research on the direct relationship of POS on OCBE has been done and has shown POS to be an important correlate of OCEB (Glavas, 2016; Khalid et al., 2021; Morales-Sanchez & Pasamar, 2019), but there has yet to be any research exploring the moderating role of POS to BV and OCBE. Other research has investigated POS-E as a moderator variable to OCBE, which has almost unanimously produced significant effects. As mentioned earlier, this is a well-established relationship that we were not interested in extending (Bhatnagar & Aggarwal, 2020; Harrach

et al., 2020). Contextual factors, of which POS is an example, have been found to be supremely important in bringing about PEB and OCBE. Especially in the workplace, contextual variables have been shown to be crucial when intending to foster any kind of behaviour (Alherimi et al., 2024; Robertson & Carleton, 2018). Generally, contextual factors might even be more influential and promising in promoting PEB than personal factors, such as values (Stern et al., 2000). By no means does this discredit the role that personal variables play in PEB but highlights the importance of the right context to promote value-driven action. To tie this back with the idea of OCBE entailing a level of risk, POS may act as a buffer for the perceived risk employees are taking with OCBE and may make them feel secure enough to engage in OCBE. This is consistent with research mentioned in the Introduction, showing that employees who feel supported and secure are more likely to engage in extra-role behaviours at work than employees who do not feel as secure (Liang et al., 2012; Liu et al., 2010; Parker et al., 2010). A study testing three kinds of influencing factors, namely individual, contextual and organisational factors found that contextual and organisational factors were most impactful in driving OCBE (Trivedi at al., 2024). These findings are in line with the results of the present research, highlighting the importance of contextual predictors and its role in facilitating OCBE. Exploratory research set in China found that contextual factors often take a moderating role in promoting PEB within the home (Ling & Xu, 2020): Researchers investigated personal values and a multitude of contextual variables and found that so-called micro-contextual factors, namely residential characteristic like population or number of communal spaces significantly affected the strength of the relationship between BV and PEB. However, this association was only found with private PEB, but not with public PEB which were also considered in Ling & Xu's (2020) study. Our research found strong support for the moderating effect of POS, a contextual variable, with regards to BV and OCBE. Yet, OCBE is a largely public behaviour that could be influenced by many other

factors such as social norms (e.g. workplace culture, peer influence). Building on Ling & Xu's (2020) findings, our model only explained a small amount of variance in our dependent variable (OCBE), suggesting that other factors might be at play in explaining most of the unexplained variance in OCBE.

Practical Implications

Our results show that BV only bring about desirable OCBE when employees feel as though their organisation is generally supportive of them and their contributions. Applying these findings to the organisational setting, it seems as though POS is key in making employees act on their BV and engage in OCBE. Leveraging this insight, employers and stakeholders should consider focusing on fostering a supportive work environment.

A healthy and supportive climate is most often a result of leadership style and behaviour (İşçi et al., 2015; Pérez-Vallejo & Fernández-Muñoz, 2020). Research investigating factors influencing POS found that through inclusive leadership styles, nurses started perceiving the organisation they work at to be more supportive (Wang et al., 2024). Training managers and supervisors to engage more positively and supportively with employees may thus further increase OCBE. Fostering supportive leadership styles and specifically training supervisors and managers to engage more positively with employees and adopt a more supportive leadership approach has revealed promising results in making an organisation seem more supportive to employees (Tafvelin et al., 2019). Another factor that was shown to be important in fostering POS is the recognition of employee efforts (Zhao et al., 2022): Understanding that engaging in extra-role behaviours such as OCBE leads to rewards or even just simple acknowledgements like verbal praise might drive employees to engage in more such behaviours (Alkahtani, 2024).

As mentioned earlier, we consciously decided to look at general POS instead of replicating previous work on POS-E. We took this decision to test whether POS alone (not

environment specific support) has the power to increase the likelihood of employees acting in value-congruent ways in order to bring about sustainable advocacy behaviours in organisations that are not yet invested in sustainability. Results support the idea that general POS has an important association with OCBE. These findings are especially interesting, as POS is a condition that organisations are already investing in for more self-serving reasons such as increased overall performance, improved innovation, less turnover and economic benefits (Palmié et al., 2023). It becomes that much more relevant when combining this with the present studies' insights that POS, as a fortunate byproduct, may also increase OCBE, when added as a moderator to the effect of BV on OCBE. Simply put, organisations should focus on fostering more supportive workplaces in order to increase employees' likelihood of voicing sustainability suggestions, through OCBE.

Limitations

While this study provides valuable insights, it is not free of limitations and shortcomings. Due to its correlational, self-report nature combined with the fact that our sample was quite small, we find ourselves restricted in our ability to draw meaningful and causal inferences from the results we found.

Environmental research is often subject to social desirability bias. Oftentimes, and especially so with self-report measures, people tend to overreport behaviours that are highly polarised in nature and that people know they should be engaging in. This bias was shown to be especially prominent in PEB (Koller et al., 2023). Even if overreporting is not deliberate, it can also be a result of false perceptions of behaviour. This should be taken into account when interpreting results of environmental self-report measures, as it could lead to overstating of results (Vesely & Klöckner, 2020).

Additionally, even though we did not reach the required sample size resulting from our power analysis conducted prior to participant recruitment, we found a strong positive

relationship between BV and OCBE, when adding POS as a moderator to the model. This could point to an unusually high strength of our hypothesised relationship (H2), which is quite rare to find in a moderation research. However, the large effect could also be due to the fact that our sample was so small. Small samples can overestimate effect sizes that would usually be smaller if the sample were bigger. In larger samples, large effects can become smaller as they become more robust and precise. It is imperative to keep this in mind upon drawing any conclusions from the present research results.

Lastly, as mentioned earlier, participants were given the option of leaving comments or suggestions at the end of the survey, which some used to comment on the length of the study. We hypothesised the survey to take 15 minutes to complete. This turned out to be an underestimation as the median time to respond to the questionnaire turned out to be roughly 19 minutes. This was mentioned to have impacted the clarity and comprehensibility of the study, making it harder to follow and stay engaged. Further, as this research was a collaborative effort assessing variables not exclusively for the present paper, some questions may have had some overlap which was further raised as a remark in the comments of the study.

We thus remain careful in interpreting our results in an extrapolated way, considering all limitations and in the subsequent section exploring potential research directions to work around present constraints.

Future Research Directions

It is of high relevance for future research to continue to explore the topic of OCBE to craft a more complete picture of its correlates and employees' role in helping to make their organisation more sustainable. Other factors seem to be influencing the manifestation of OCBE, as indicated by the overall model fit. The present model, offering promising support for our hypothesised moderating effect of POS, may be extended and replicated with

additional contextual factors focusing more specifically on the concept of risk, as mentioned in previous sections. Variables like job security might be valuable to investigate as they might make employees high on BV more likely to act on their values due to the possible circumvention of their fear of negative consequences. Previous research has shown a positive relationship between job security and OCB (Konya & Bayo, 2021). Hence, investigating how job security acts in combination with BV and POS could be promising in further bridging the value-action gap to OCBE.

Other ways in which perceived risk could be minimised, might be by establishing strong descriptive and injunctive norms. Descriptive norms are defined as perceptions of how people typically behave in specific situations and injunctive norms are perceptions of what is approved or disapproved by others (Raihani et al., 2014). Descriptive and injunctive norms have been shown to positively relate to PEB (Ren et al., 2024). If one feels as though a norm or duty exists to voice concerns and be an active member of an organisation, employees might be more likely to bring up environmental concerns and participate in an organisation's culture of speaking up through OCBE. If employees feel as though their coworkers actively engage in OCBE, employees may feel as though such behaviours are expected and normal and will thus be more likely to contribute through similar actions. Research shows that perceptions of co-workers' pro-environmental behaviours directly contribute to employees' tendency to also engage in pro-environmental behaviours at work (Mouro & Duarte, 2021). Seeing other employees frequently engaging in OCB and not experiencing any negative consequences could neutralise overall risk perceptions of such behaviours and subsequently increase their frequency.

Finally, we recommend future research to replicate the present study with a larger sample size and more robust methodology in order to verify results, increase sample representativeness and test whether the effect we found would hold across populations and

with a larger sample. This would further help mitigate response biases (e.g. social desirability), which would increase generalisability and reliability of findings.

In short, future research is needed to continue to bridge the gap by exploring new influencing factors and potentially extend the present research by adding factors that have been previously shown to inhibit or promote OCBE and test them in combination BV and POS. Further, we recommend a conceptual replication with a larger sample and a clearer measure to increase confidence in findings and assure reliability and generalisability.

Conclusion

Through testing potential bridging factors of the value-action gap - which in the context of PEB is particularly prevalent (Gifford, 2011; Kollmuss & Agyeman, 2002) - the present paper aimed to contribute to the existing body of literature of factors facilitating OCBE. In practice, findings may help organisations consider the importance of organisational climate and supportive organisation-employee interactions in bringing about OCBE. Through OCBE organisations are given the opportunity to determine exactly where efforts should be focused to bring about positive environmental change. This research sought to explore the relationship between BV, POS, and OCBE. We contributed to the literature on OCBE by adding an unexplored dimension, namely our new dimension (POS*BV), as a moderation variable. We found no support for the direct effect of BV on OCBE, indicating that BV on its own had no significant effect on OCBE. However, results supported our total model, showing that the effect of BV on OCBE, depends on the strength of the level of support employees perceive to receive. Future research is recommended to address gaps through extending and replicating the present study, to increase overall confidence in findings. With that, the present study adds onto the body of literature and research addressing one of the most urgent topcis

of the present day – climate change. Interventions increasing POS might prove fruitful in bringing about increased OCBE and their implementation is thus recommended.

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Appendix A

Participant Recruitment

Figure A1

Recruitment Flyer

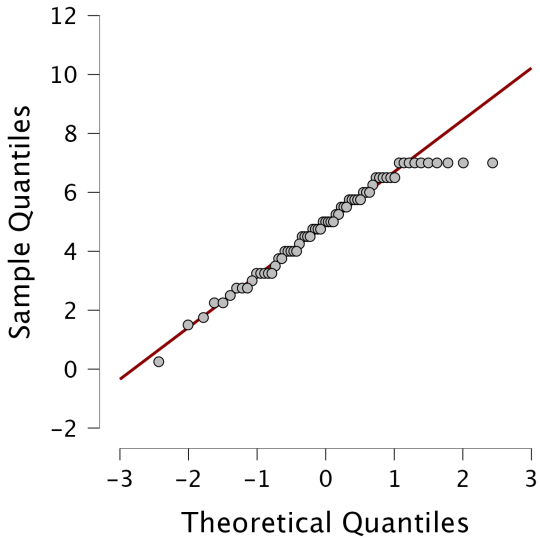
Note. The WhatsApp message used to recruit participants included the following text: "Hi, we're studying how values, beliefs and norms impact sustainability, and we'd love your input! Could you spare 15 minutes to complete our survey? As a thank you, you'll have the option to enter a drawing to win one of five 30euro Visa/ Mastercard gift cards. Survey Link: https://rug.eu.qualtrics.com/jfe/form/SV_1FBzJGgLns8RIKa Thank you for considering this!"

Appendix B

Assumption Tests Output

Figure B1

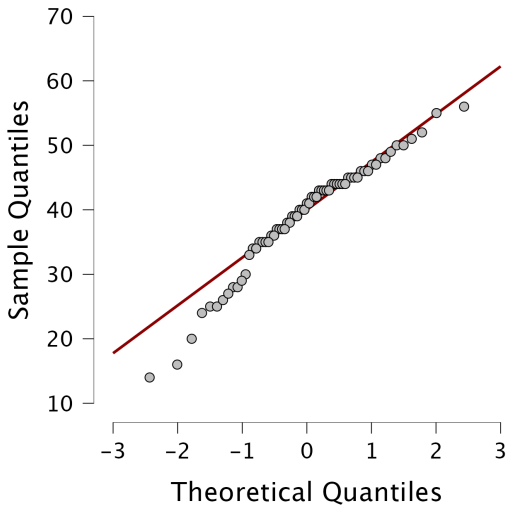
Residual Plot BV



Note. BV = Biospheric Values

Figure B2

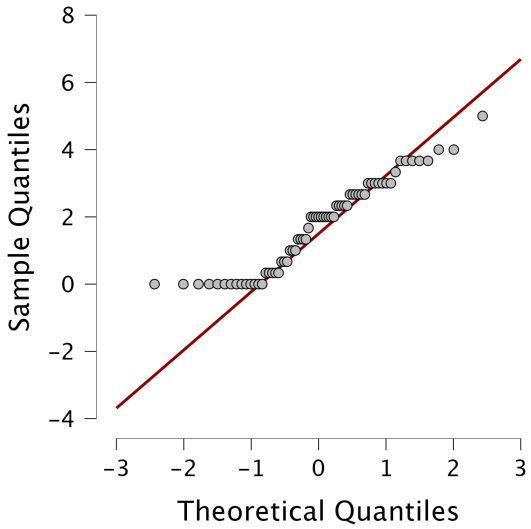
Residual Plot POS



Note. POS = Perceived organisational support

Figure B3

Residual Plot OCBE



Note. OCBE = environmental organisational citizenship behaviour

Figure B4

Scatterplot Biospheric Values - POS

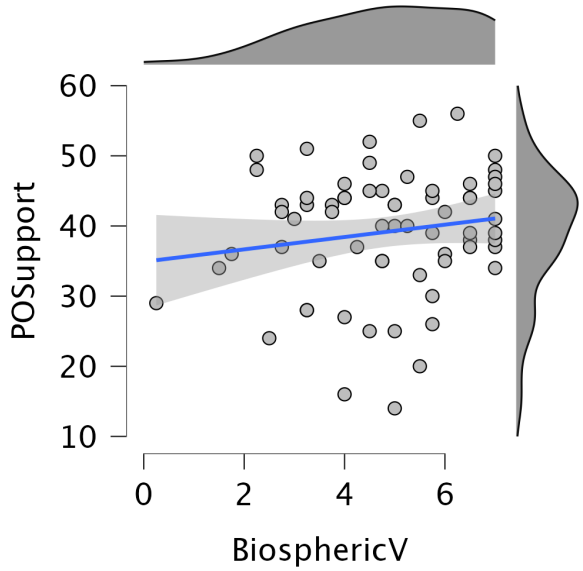


Figure B5

Scatterplot BV – OCBE

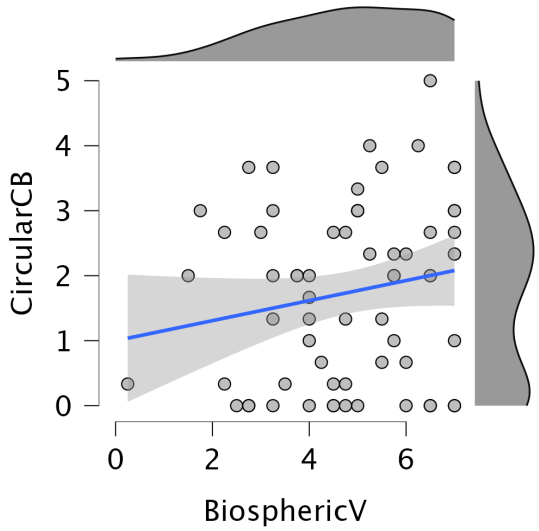


Figure B6

Scatterplot OCBE – POS

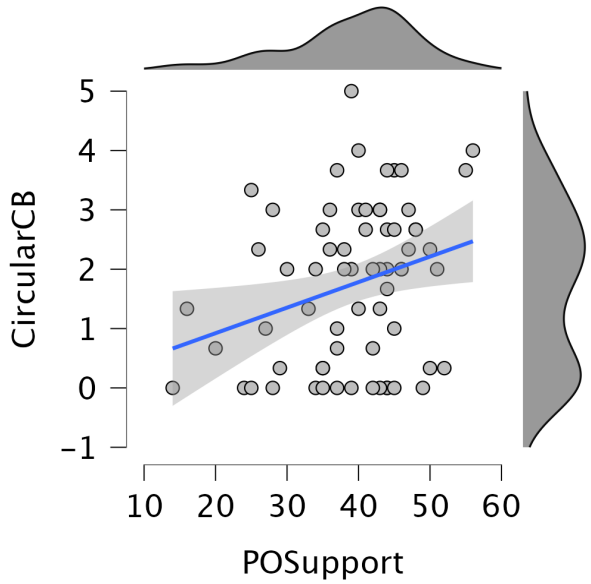


Table B1

Regression output including Durbin-Watson Statistic

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,332[a]	,110	,083	1,28301	1,587

a. Predictors: (Constant), BV_POS, Mean Biospheric Values

b. Dependent Variable: Mean OCBE

Table B2

Coefficients Table with Variance-Inflation Factor

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1,243	,495		2,509	,015		
	Mean Biospheric Values	-,253	,189	-,306	-1,341	,185	,263	3,802
	BV_POS	,073	,030	,555	2,432	,018	,263	3,802

a. Dependent Variable: Mean OCBE