

# ORGANIZATIONAL CITIZENSHIP BEHAVIOUR: EVOLUTION OF THE CONCEPT IN THE SCOPE OF INDUSTRY 4.0 AND INDUSTRY 5.0

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## ABSTRACT

**Purpose:** Organizational citizenship behaviour (OCB) is defined as an individual's behaviour that is discretionary, not directly or explicitly recognized by the formal reward system, and promotes the efficient and effective functioning of the organization. This concept originated during the period of the Industry 3.0 revolution. Now employees are working during the Industry 4.0 and Industry 5.0 revolutions, which are reshaping the nature of work roles and requirements. This article analyses how the OCB concept evolved during these revolutions.

**Design / Methodology / Approach:** The article follows the method of a narrative literature review, examining papers on OCB and summarizing (1) the origin of OCB, the definition of OCB and concepts related to OCB – contextual performance and prosocial behaviour; (2) two groups of OCB dimensions – according to behaviour and the beneficiary – as well as the importance of recognizing context for OCB dimensions; and (3) suggestions for future research.

**Conclusions / Findings:** Our research shows the gap in previous literature in regard to analysing OCB dimensions in the context of Industry 4.0 and Industry 5.0. OCB is outside of work-role behaviours, which depends on context, and its dimensions were originally developed during Industry 3.0. Though previous literature found that the Industry 4.0 and Industry 5.0 revolutions change workplaces and thus work-role requirements, there is little evidence of how this influences citizenship behaviour since existing research works have not focused on capturing new dimensions of OCB which may be emerging in the context of Industry 4.0 and Industry 5.0.

**Research and Practical Implications:** The findings show that more research should be conducted to fill the gap of evolved OCB dimensions in existing literature. This could help scholars to use the OCB scale, which has been updated according to the Industry 4.0 and Industry 5.0 context, and practitioners to better understand the extra-work-role behaviours that are most relevant for organizational effectiveness in the new era of work.

**Original Contribution:** The study contributes towards future research on OCB in the Industry 4.0 and Industry 5.0 context.

**Keywords:** organizational citizenship behaviour, Industry 4.0, Industry 5.0

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## INTRODUCTION

It is inarguable that all organizations are created by individuals; organizational aims are set by individuals, and whether these aims are achieved depends on individuals. Thus, to explain why similar organizations in the same industry perform differently from an individual perspective means to understand why their employees make different efforts toward organizational performance. The call to understand why some employees choose to work in a way that will benefit their organizations and others don't, influences researchers to test already known concepts and to seek new ones.

The concept of organizational citizenship behaviour was first presented by Bateman and Organ (1983). Since then, this type of "extra-role" employee behaviour has been of increasing interest to academic and professional researchers from different areas. In the period of 1983-2003, 270 papers were published which included the organizational citizenship behaviour concept; from 2003-2013, 1,563 were published; and in the last decade, 3,665 have been published (SCOPUS database).

The concept of organizational citizenship behaviour originated during the Industry 3.0 revolution, characterised by the usage of electronics and IT systems in manufacturing, but according to Demir and Cicibas (2017), today we are at the door of the next revolution, Industry 4.0, which has started thanks to new technological developments such as artificial intelligence (AI), the Internet of things (IoT), big data and cloud computing. Industry 5.0, also known as the value-driven revolution, came along with Industry 4.0 after the European Commission called for the Fifth Industrial Revolution in 2021 (Xu et al., 2021). Industry 4.0 and Industry 5.0 not only require new skills for employees but also reshape workplaces. Changes in workplaces lead to new organizational structures, work procedures and job descriptions. Moreover, the changes in the nature of work influence the nature of citizenship behaviour (Dekas et al., 2013).

Jha and Jha (2010) argue that organizational citizenship behaviour (OCB) is a concept with a controversial nature due to research in which many authors have challenged its discretionary characterization. Despite existing criticism of OCB, it is important to review how this concept evolved during the last few decades, when new technologies rapidly changed and/or questioned nearly all concepts in existing knowledge on individual behaviour. The aim of this paper is to analyse in previous literature how OCB dimensions have evolved from the original context of Industry 3.0 to the existing context of Industry 4.0 and Industry 5.0. To reach this aim, the authors of this article conducted a narrative literature review which provides the historical evolution and conceptualization of OCB through the analysis of existing literature (Oliver, 2012). To conduct a narrative literature review according to recommendations by Wee and Banister (2016), the search criteria included the following steps: 1) choosing keywords – the choice was based on the topic and the aim of the article: organizational citizenship behaviour, definition of organizational citizenship behaviour, dimensions of organizational citizenship behaviour, cultural context, Industry 4.0, Industry 5.0; 2) choosing the period – the choice was based on the requirement to historically evaluate the concept of OCB: 1983-present; 3) choosing databases – the choice was based on the requirement to use reliable scholarly sources for analysis: Scopus, ResearchGate and Google Scholar. During the search process, the authors also closely reviewed cited references to identify research works relevant to the aim of this article, including those which were published before 1983. As a result, more than 120 papers were downloaded, and after reading their abstracts and conclusions the authors proceeded with 64 academic papers which were reviewed in depth and included in the reference list.

This paper consists of the following sections: the first section describes the origin of OCB, the definition of OCB and concepts related to OCB – contextual performance and prosocial behaviour; the second section discusses two groups of OCB dimensions – according to behaviour and beneficiary – as well as the importance of recognizing a context for OCB dimensions; this is followed by suggestions for future research.

## **ORGANIZATIONAL CITIZENSHIP BEHAVIOUR**

The first mention of citizenship behaviour dates to 1983, when Bateman and Organ published their work “Job Satisfaction and the Good Soldier: The Relationship Between Affect and Employee ‘Citizenship’”. The authors discussed types of work behaviour which cannot be included in a role description, for example: taking orders without a negative reaction, helping colleagues with their tasks, keeping the workspace clean, promoting a work atmosphere which doesn’t lead to conflicts, and so on. Due to their extra-role requirements nature, the authors presented the term citizenship behaviours. Since then, for several decades, researchers have been bonding the utilization of organizational citizenship behaviour to workplace functioning while validating predictors and drivers of such behaviours (Methot et al., 2017).

Two decades before the term “citizenship behaviour” appeared for the first time, Katz (1964) was already concerned about types of activities which are innovative and spontaneous but at the same time go beyond work-role descriptions. The author pointed out that “an organization which depends solely upon its blueprints of prescribed behaviour is a very fragile social system” (p. 132). Earlier, Barnard (1938) linked the concept “willingness to cooperate” to “informal organization” and stated that “it is clear that the willingness of a person to contribute efforts to the cooperative system is indispensable” (p. 83).

Roethlisberger and Dickson (1964), when using the term “cooperation” as a dimension of individual and group functioning, in fact meant something equivalent to “citizenship behaviour” since they referred to cooperation as prosocial behaviour. Moreover, they considered cooperation as a product of informal organization, whereas productivity was determined by formal organization. Thus, they suggested that there are two levels of analysis: (i) an aggregated (firm) level, where cooperation and efficiency are dependent on each other in the long run, and (ii) an individual level, where prosocial behaviour is connected to cooperation (citizenship behaviour).

Later, other authors supported the idea of employee behaviours that are different from in-role prescriptions but contribute to the organization. For example, Katz and Kahn (1966) argued that academicians and practitioners usually take spontaneous behaviours for granted because of their mundane nature and theorized that such cooperative behaviours are not connected to the same motives which sustain in-role or technical employee performance. Also, Thompson (1967) stated that in different organizations it is essential to have cooperative behaviour (spontaneous give and take) because only in this way can problems be solved regarding situations which cannot be specified in advance (patient treatment, crime investigation, customer support, etc.). “Substantively, citizenship behaviours are important because they lubricate the social machinery of the organization” (Smith et al., 1983, p. 653).

## Definition of OCB

Organ (2018) described retrospectively that the main reason which influenced him to explore extra-role behaviours was that academic researchers and managers-practitioners had controversial points of view on the relationship between job satisfaction and productivity of individuals or work groups. As a result, in 1977 he wrote a paper about these concerns and submitted it to the Academy of Management Review (Organ, 1977). Further, his doctoral students Bateman and Smith decided to test in their empirical studies what Organ wrote in his paper about performance, which employees contribute to not merely through quantitative productivity, but also by helping colleagues, supporting new hires, keeping their workplaces clean, showing stellar attendance or going the extra mile to assist customers (Organ, 2018).

The OCB definition “individual behaviour that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization” (Organ, 1988, p. 4) was the same as presented in earlier works (Bateman and Organ, 1983; Smith et al., 1983) but had small stylistic differences. Organ (1990) anticipated upcoming criticism and pointed out three “soft spots” of this definition: (i) the discretionary character of OCB, (ii) noncontractual rewards from OCB and (iii) the required contribution of OCB to organizational effectiveness. Though Organ (1990) thought that the third issue regarding OCB’s contribution to organizational effectiveness aggregated through time and individuals would be the most problematic part of the OCB definition, it happened that several studies confirmed this relationship (Karambaya, 1991; Podsakoff and MacKenzie, 1994). Thus, according to Organ (1997), the following criticism toward the OCB definition was mostly directed at its (i) discretionary character and (ii) noncontractual rewards requirements:

- i. the discretionary character of OCB or in other words the types of behaviours which are not included in the job description were criticized because many respondents had difficulties distinguishing between extra-role and in-role behaviours. Organ suggested that the source of this problem lies in the incoherent character of the terms “role” and “job”.
- ii. noncontractual rewards as an OCB requirement were specified by Organ as those which were not prescribed by the formal reward system of the organization, but this didn’t mean that citizenship behaviours could not be recognized and rewarded.

Due to the fact that of the three initial conditions of OCB only one was left – (iii) contribution to organizational effectiveness – Organ redefined OCB as “contributions to the maintenance and enhancement of the social and psychological context that supports task performance” (Organ, 1997, p. 91). This working definition suggests that OCB is different from task performance thanks to being less likely to be considered as (i) an enforced job requirement and (ii) linked to systematic reward.

Though Organ revised the OCB definition in 1997, in later works authors refer to the initial version: “individual behaviour that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization” (Organ et al., 2005, p. 3).

In their systematic review, Ojebola et al. (2020) pointed out the following OCB definitions.

**Table 1 Definitions of Organizational Citizenship Behaviour**

Definition of OCB	Source
“Individual behaviour that is discretionary, not recognized by the formal reward system, and that in total promotes the effective functioning of the organization”	Gabriel, J. M. O. (2015), <i>Organizational citizenship behaviour (OCB) and corporate resilience in the domestic aviation sector in Nigeria</i> , unpublished doctoral dissertation, Rivers State University of Science and Technology.
“Behaviours that are optional to employees which are not part of employees’ prescribed functions”	Oladipupo, L. (2016), “The influence of perceived occupational stress on the organizational citizenship behaviour of bankers in Ikeja, Lagos State”, <i>European Scientific Journal</i> , Vol. 12, No. 17.
“Behaviours that (i) are not formally demanded and directly compensated but can be useful to the processes of the organization; (ii) are beyond the stipulated roles and above the organization regulation and procedures”	Tambe, S. (2014), <i>A study of organizational citizenship behaviour (OCB) and its dimensions: A literature review</i> .
Behaviours that surpass defined roles but are essential for a firm’s success	Rauf, F. A. (2016), “Two sides of the same coin: harmful or helpful? A critical review of the consequences of organizational citizenship behaviour”, <i>Journal of Advance Management and Accounting Research</i> , Vol. 3, No. 9.
“Individual behaviour in the workplace, not directly recognized by an organization’s formal reward system, yet serves to promote the general well-being of the organization”	Kandeepan, V. (2016), “Organisational citizenship behaviour of non-academic staff members in the university system of Sri Lanka: A case study in university of Jaffna”, <i>International Journal of Information Research and Review</i> , Vol. 3, No. 1, pp. 1710–1716.
“Workplace undertakings that go beyond an employee’s prescribed work roles which contribute to the effective functioning of a firm”	Nadim, M., Hassan, M. M., Abbas, S. and Naveed, A. (2016), “The role of organizational commitment and perceived organizational support in promoting organizational citizenship behaviour”, <i>PEOPLE: International Journal of Social Sciences</i> , Vol. 2, No. 3.
“The array of cooperative behaviours that are positive, intended and non-obligatory that goes beyond the set requisite of the job but are significant because they support the social, organizational and psychological components to accomplish both individual and organizational performance”	Sridhar, A., Thiruvankadam, T. (2014), “Impact of employee engagement on organization citizenship behaviour”, <i>BVIMSR’s Journal of Management Research</i> , Vol. 6, No. 2, pp. 147–155.
“Extends beyond the expected role of an organization which fosters cooperation among coworkers, work groups, and/or the firm”	Akturan, A., Çekmecelioğlu, H. G. (2016), “The effects of knowledge sharing and organizational citizenship behaviours on creative behaviours in educational institutions”, <i>Procedia – Social and Behavioural Sciences</i> , Vol. 235, pp. 342–350.
“Discretionary behaviour that is not part of job roles and not acknowledged by the organization compensation structure but enhances the firm’s effectiveness, efficiency and overall performance of the organization”	Acaray, A., Akturan, A. (2015), “The relationship between organizational citizenship behaviour and organizational silence”, <i>Procedia – Social and Behavioural Sciences</i> , Vol. 207, pp. 472–482.

Created by the authors based on Ojebola *et al.* (2020, p. 3)

## Concepts Related to OCB

Organ (2018) considered that there are two constructs related to OCB: contextual performance and prosocial behaviour. These constructs are described below.

**Contextual Performance.** Borman and Motowidlo (1993) analysed the construct job performance and found that it consists of two distinctive concepts: task performance and contextual performance. Later, Motowidlo and Van Scotter (1994) supported this distinction and confirmed the multidimensionality of performance. They argued that while task performance is directly related to an organization's technical core, contextual performance supports the social and psychological context for the organization's technical core functioning.

According to Borman and Motowidlo (1993), task performance (TP) behaviours vary across jobs, while contextual performance (CP) behaviours are similar across jobs. Moreover, Motowidlo and Van Scotter (1994) stated that TP and CP differ from other behavioural constructs, including OCB, because they (i) specified behaviours which accomplish certain work tasks separately from behaviours that have broader motivational implications and are more organizationally valuable; (ii) "were developed specifically for use in selection research" (p. 476). Bergeron (2007) added to previous research her support that TP consists of in-role behaviours which may be included in job descriptions and are different across jobs while related (directly and indirectly) to a company mission.

Conducting a systematic search of constructs which described work performance, Koopmans et al. (2011) presented a heuristic framework with sample indicators which included TP and CP (p. 48):

- TP is "completing job tasks, quantity and quality of work, job skills, job knowledge, keeping knowledge up-to-date, working accurately and neatly, planning and organizing, administration, decision making, solving problems, oral and written communication, monitoring and controlling resources".
- CP is "extra tasks, effort, initiative, enthusiasm, attention to duty, resourcefulness, industriousness, persistence, motivation, dedication, proactivity, creativity, cooperating with and helping others, politeness, effective communication, interpersonal relations, organizational commitment".

To summarize, TP is job-prescribed behaviours which are formally recognized, while OCB behaviours are not required by job descriptions and are not rewarded systematically. Thus, TP and OCB are not related concepts, as opposed to CP and OCB, which are related ones. Though CP and OCB are overlapping concepts, they are different paradigms (Organ, 2018), because they have different approaches and predictors.

**Table 2 Organizational Citizenship Behaviour and Contextual Performance**

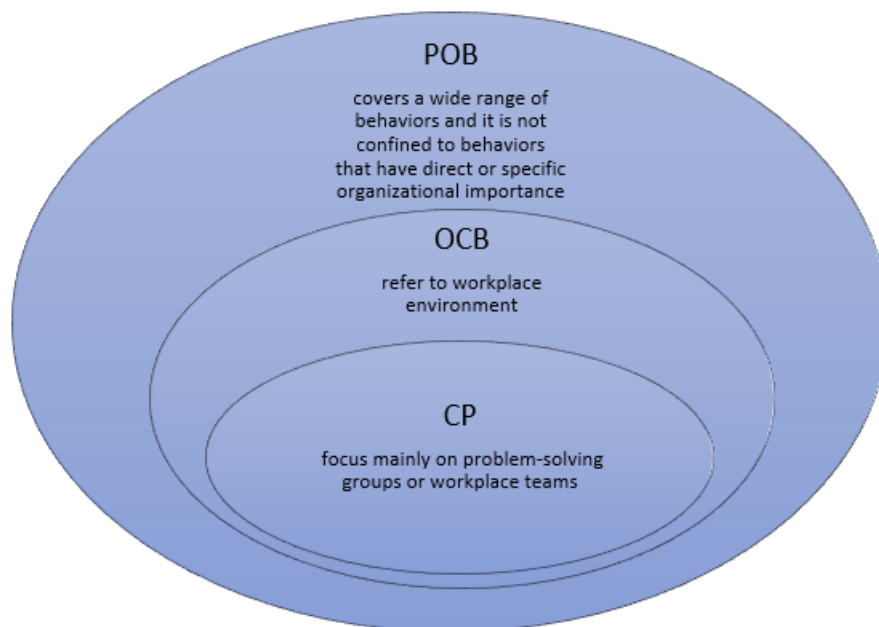
<i>OCB</i>	"represents the informal modes of cooperation and contributions that participants render as a function of job satisfaction and perceived fairness"
<i>CP</i>	"refers to the spontaneous gestures that people offer toward sustaining a constructive interpersonal climate for group problem-solving and creativity"

Source: created by the authors based on Organ (2018, p. 297)

**Prosocial Behaviour.** Prosocial behaviour is a behaviour through which people benefit others (Eisenberg, 1982). Based on an analysis, Brief and Motowidlo (1986) suggested 13 dimensions of POB with the following antecedents: empathy, extraversion, social responsibility, neuroticism, educational level, age, achievement motivation, the Protestant work ethic, and mood. The authors argued that POB is directed at individuals and doesn't always benefit the organization, and this is the main difference between POB and OCB since the latter always contributes to organizational effectiveness.

Organ et al. (2005) also indicated that the framework of POB as helping behaviour might seem to be fitting for OCB research but OCB (i) has other dimensions which are not connected to immediate help and (ii) emerges in long-time structured contexts in organizational settings, while "prosocial behaviour is spontaneous, occurs without prospect of compensation, and can be a function of mood, an internalized norm, the time available, and/or stable individual differences" (Organ et al., 2005, p. 5). Briefly, according to Organ (2018), prosocial behaviour (POB) is mostly regular activities aimed to promote in society (i) a healthy atmosphere and (ii) less stress. He stated that POB is an open-ended domain which includes OCB and CP.

To conclude this section, OCB has two related concepts: POB and CP. The broadest construct is POB, but it is distinct from OCB because it doesn't aim for organizational effectiveness. CP is a narrower construct than OCB because it aims only for work performance and is predicted by personality factors (Figure 1).



**Figure 1 Prosocial Behaviour (POB), Organizational Citizenship Behaviour (OCB), Contextual Performance (CP)**

Created by the authors based on Organ (2018)



## OCB DIMENSIONS

Smith et al. (1983) were the first to propose dimensionality for the OCB concept. In the beginning, there were only two dimensions: altruism (helping behaviour toward individuals) and generalized compliance (behaviour related to compliance with organizational norms and rules). Later, Organ (1988) presented a five-dimensional OCB classification which consisted of altruism, conscientiousness, civic virtue, sportsmanship and courtesy. Since then, this five-dimensional classification has been under constant scrutiny from different researchers. Researchers have studied these dimensions, added others and proposed their own. For example, Williams and Anderson (1991) presented a two-dimensional OCB classification – OCBI (behaviour targeting individuals) versus OCBO (behaviour targeting the organization) – which was in fact based on Smith et al. (1983), their dimensions altruism (OCBI) and generalized compliance (OCBO).

### Groups of OCB Dimensions

Somech and Drach-Zahavy (2004) proposed to divide OCB into two main groups: according to behaviour and beneficiaries. This section will discuss the main ideas and results of previous research which provides characteristics and descriptions of these groups of OCB dimensions.

**OCB Dimensions by Behaviour.** The term “organizational citizenship behaviour” appeared in the name of an article published in the Journal of Applied Psychology. In this article, Smith et al. (1983) argued that citizenship behaviour is a category of performance which has at least two dimensions: altruism and generalized compliance (Table 3).

**Table 3 Altruism and Generalized Compliance**

<i>Altruism</i>	“...a class of helping behaviours aimed directly at specific persons. The eliciting stimuli appear to be situational, that is, someone has a problem, needs assistance, or requests a service”
<i>Generalize compliance</i>	“the behaviour (e.g., punctuality, not wasting time) seems to represent something akin to compliance with internalized norms defining what a ‘good employee ought to do’”

Source: Created by the authors based on Smith *et al.* (1983, pp. 657–661)

The dimension which at the time was called generalized compliance represented a more personal type of OCB – conscientiousness to go far beyond all enforceable standards related to work attendance and usage of your time at work (Organ, 1990). The other three dimensions – civic virtue, courtesy and sportsmanship – were presented by Organ (1988) together with deconstructing generalized compliance into conscientiousness. Two more dimensions, cheerleading and peacekeeping, were added by Organ (1990) to the existing five categories: (i) cheerleading – the term itself implies that it is a behaviour which is directed at celebrating task-accomplishments of colleagues; (ii) peacekeeping – this type of behaviour describes situations when employees notice that a conflict could grow into a war among their colleagues and they take steps to calm participants of the conflict and to help them “save face”. However, there were only a few papers validating altruism,



cheerleading and peacekeeping as distinctive dimensions since the interviewed managers usually considered them and courtesy as one type of helping behaviour (Podsakoff et al., 1997).

Though later Organ (1997) agreed with some criticism regarding the name of the dimension altruism and offered to use in future helping or helpfulness, researchers continue to use its original version altruism in Organ's five-dimensional classification.

Voice became one more dimension of OCB which was considered distinctive from helping behaviour according to LePine and Van Dyne (1998), who defined voice as

“nonrequired behaviour that emphasizes expression of constructive challenge with an intent to improve rather than merely criticize”. Maynes and Podsakoff (2014) argued that voice has a lot of controversial forms because it is not only about feedback and suggestions but also about a demonstration of dissatisfaction and non-constructive criticism of co-workers. Organ (2018) mentioned a researcher who suggested that covenantal organizations would require and foster OCB, including voice. However, Organ (2018) argued that in many industrial and economic non-covenantal organizations, especially big ones, voice consists of harmful behaviour including complaints and expressions of dissatisfaction.

To summarize the dimensions which according to Jha and Jha (2010) are called “Organ's classification”, in Table 4 they are shown together with descriptions:

**Table 4 Organ's (1988) Classification of Dimensions of Organizational Citizenship Behaviour**

Name	Description
<i>Altruism</i>	“helping other members of the organization in their tasks”
<i>Conscientiousness</i>	“dedication to the job and desire to exceed formal requirements in aspects such as punctuality or conservation of resources”
<i>Civic virtue</i>	“responsibly participating in the life of the firm”
<i>Sportsmanship</i>	“accepting less than ideal circumstances”
<i>Courtesy</i>	“preventing problems deriving from the work relationship”

Source: Created by the authors based on Jha and Jha (2010, pp. 28–29)

Civic virtue was first mentioned as a dimension by Organ (1988), but it was presented earlier by Graham (1986), who defined one more form of OCB as “responsible participation in the political life of the organization”. This form was predicted based on political philosophy, which in turn was the source for the term citizenship (Graham, 1986). According to Graham and Van Dyne (2006), civic virtue has two forms: CV-information and CV-influence. Their argumentation is based on the political philosophy perspective on responsible organizational citizens:

1. On the one hand, a responsible citizen gathers information, stays abreast of news and processes and thus is informed about potential problems for his/her organization and/or group and/or job (CV-information).

2. On the other hand, change-oriented behaviour is a part of the description for those responsible citizens who are “speaking up” and “making suggestions for change” (CV-influence).

These two forms of civic virtue have not gained attention from other researchers – the article was cited only 71 times, while “CV-information” and “CV-influence” as keywords are included only in one article (SCOPUS database). Podsakoff et al. (2000) examined previous literature and indicated 30 different types of citizenship behaviour. Based on an analysis of all these types, the authors found conceptual overlap and as a result concluded that there are only 7 distinct dimensions of OCB (Table 5).

**Table 5 Classification of Dimensions of Organizational Citizenship Behaviour by Podsakoff et al. (2000)**

Name	Definition
<i>Helping behaviour</i>	“helping behaviour involves voluntarily helping others with, or preventing the occurrence of, work-related problems”
<i>Sportsmanship</i>	““good sports” are people who not only do not complain when they are inconvenienced by others, but also maintain a positive attitude even when things do not go their way, are not offended when others do not follow their suggestions, are willing to sacrifice their personal interest for the good of the work group, and do not take the rejection of their ideas personally”
<i>Organizational loyalty</i>	“organizational loyalty entails promoting the organization to outsiders, protecting and defending it against external threats, and remaining committed to it even under adverse conditions”
<i>Organizational compliance</i>	“an employee who religiously obeys all rules and regulations, even when no one is watching, is regarded as an especially ‘good citizen’” (p. 524)
<i>Individual initiative</i>	“extra-role only in the sense that it involves engaging in task-related behaviours at a level that is so far beyond minimally required or generally expected levels that it takes on a voluntary flavor”
<i>Civic virtue</i>	“reflect a person’s recognition of being part of a larger whole in the same way that citizens are members of a country and accept the responsibilities which that entails”
<i>Self-development</i>	“self-development includes voluntary behaviours employees engage in to improve their knowledge, skills, and abilities”

Source: Created by the authors based on Podsakoff et al. (2000, pp. 516–525)

Dekas et al. (2013) argue that changes in workplaces, especially for knowledge workers, which were caused by new technologies, have outdated some OCB dimensions and created new ones. They examined citizenship behaviours for knowledge workers and found a new OCB-KW scale: helping, voice, civic virtue, employee sustainability, and social participation.

This part of the section focuses on OCB dimensions based on types of employee behaviour. During the first two decades after the concept of OCB was originated, there were 133 studies using more than 40 different combinations of dimensions, and LePine et al. (2002) considered this a threat to future validation of OCB. To conclude, there were many papers aimed at making OCB dimension

classification based on behavioural types, as well as papers which criticized this approach, but today the majority of research frameworks are based on Organ's 5-dimensional classification (1988) and the 7-dimensional classification by Podsakoff et al. (2000). In the next part of this section, there will be an analysis of one more OCB dimension classification based on the type of beneficiary.

**OCB Dimensions by Beneficiaries.** Based on previous research, Williams and Anderson (1991) suggested two categories of OCB: (i) OCBO – behaviours that benefit the organization and (ii) OCBI – behaviours that directly benefit individuals and indirectly contribute to the organization. The results of this study confirmed the hypothesis that OCBI and OCBO are different constructs with different predictors – the extrinsic component relates to OCBO, while the intrinsic component relates to OCBI.

Describing OCB dimensions by beneficiaries, Campbell Pickford and Joy (2016) referred to prosocial behaviour as similar to OCB. Indeed, prosocial behaviour, according to Brief and Motowidlo (1986), is another term for OCB. McNeely and Meglino (1994) argued that previous prosocial behaviour research lacked clear differentiation between beneficiaries, and this led to the double meaning of prosocial behaviour, because only when beneficiaries are distinguished is it possible to determine factors which are responsible for behaviour toward individuals vs. the organization. Moreover, they criticized previous research, including Williams and Anderson (1991), which used a full scale of altruism, though it consists of prosocial behaviours directed both at individuals (e.g., helping others) and the organization (e.g., suggesting ways of improving the department). As a result, they concluded that behaviour toward individuals is related to empathy, while behaviour toward the organization is related to organizational context (reward fairness and recognition of behaviour).

Discussing the Williams and Anderson labels, Organ (1997) agreed that researchers in future could designate dimensions of OCB that are targeted toward (i) an individual as OCBI and those targeted toward (ii) a unit or the organization as OCBO. Though arguing against the differentiation of OCB into components due to their strong correlation and overlapping, LePine et al. (2002) recommended using in future research OCBO and OCBI, considering them conceptually separate.

This separation of OCB also has practical implications for organizations (Campbell Pickford and Joy, 2016): to enable behaviours that benefit organizations (OCBO), managers need to consider organizational structures that attract employees, but if they are interested in behaviours targeting individuals, recruiting processes need to assess candidates' traits related to OCBI.

## OCB Dimensions by Context

To summarize the previous part, there are two main groups of OCB dimensions: according to behaviour and beneficiaries. Studies usually are based on a certain set of OCB dimensions but there are studies which focus only on one specific OCB dimension (e.g., Maynes and Podsakoff, 2014; Koopman et al., 2016). Though the concept of OCB is multidimensional, Somech and Drach-Zahavy (2014) maintained that it has to be considered as a context-related phenomenon, and this part discusses behaviours in the following contexts: (i) cultural and (ii) industry revolutions.

**OCB Dimensions by Cultural Context.** Previous parts of this section described two perspectives of OCB: 1) behavioural (the most popular classifications are (i) Organ's: altruism, conscientiousness, civic virtue, sportsmanship, courtesy; and (ii) Podsakoff et al.: helping behaviour,

sportsmanship, organizational loyalty, organizational compliance, individual initiative, civic virtue, self-development); 2) beneficiary (i) OCBI (targeted to individuals and indirectly contributing organizations) and (ii) OCBO (targeted to the organization).

Johns (2006) argued that context is not sufficiently recognized by researchers in the field of organizational behaviour. Discussing directions for future research, Organ (2018) proposed conducting more empirical studies on OCB in non-North American cultures because at that point there were only a few studies which considered cultural differences and how they may impact individuals' perceptions of citizenship behaviour. Thanks to the fact that the concept OCB originated in North America, in the beginning, its dimensions were validated exclusively in the cultural context of North America. Moreover, during the first decade after 1983 cultural context wasn't taken into consideration by OCB researchers. Moorman and Blakely (1995) showed this gap when testing the effects of IC (individual collectivism) on OCB dimensions. The results of their study suggested that individuals with collectivistic values or norms have a higher possibility to perform OCB. This research was provided in one cultural context and the authors considered that IS could be different in other cultures.

In their work aimed at testing the relationship between organizational justice and OCB, Farh et al. (1997) asked the following question: "What role, then, do individual differences in cultural values play in determining what citizenship behaviour is....?". To test the relationship between organizational justice and OCB, the authors carried out two studies, in the first of which they developed a dimension of OCB in Chinese society (Taiwan) and compared it to a Western classification based on Podsakoff et al. (1990) and Podsakoff et al. (1993). Regarding OCB dimensions in Chinese society, they concluded that there are three identical dimensions with Western OCB – (i) identification with the company (civic virtue), (ii) altruism toward colleagues (altruism), (iii) conscientiousness (conscientiousness) – and two discretionary dimensions: (iv) interpersonal harmony, (v) protecting company resources.

**Table 6 Organizational Citizenship Behaviour Dimensions in Chinese Society**

<b>OCB dimension in Chinese society</b>	<b>Definition</b>
<i>Identification with company</i>	"Very similar to civic virtue in definition. Items here also emphasize the willingness on the part of the employees to spread positive company news to outsiders; defend company reputation; make suggestions for improvement"
<i>Altruism toward colleagues</i>	"Identical to Western altruism in definition; very similar item contents"
<i>Conscientiousness</i>	"Identical to Western Conscientiousness; very similar item contents"
<i>Interpersonal harmony</i>	"Discretionary behaviour by an employee to avoid pursuing personal power and gain with detrimental effects on others and the organization"
<i>Protecting company resources</i>	"Discretionary behaviour by an employee to avoid negative behaviours that abuse company policies and resources for personal use"

Source: Created by the authors based on Farh *et al.* (1997, p. 10)

Another cultural context, Indian, was discussed by Bakhshi et al. (2009). The authors identified five major OCB dimensions: conscientiousness, helping coworkers, group activity participation, sportsmanship and courtesy.

To find out OCB dimensions for Sri Lanka, Rauf and Kumar (2015) studied academic staff members and as a result of this study, they identified eight dimensions: self-training, altruism, courtesy, conscientiousness, conservation of organizations' property, civic virtue, sportsmanship and loyalty.

**Table 7 Organizational Citizenship Behaviour Dimensions in Sri Lanka**

<b>OCB dimension in Sri Lanka</b>	<b>Definition</b>
<i>Civic virtue</i>	"Discretionary behaviour which includes acts of creativity and innovation to improve the organizational performance"
<i>Altruism</i>	"Discretionary behaviours that help another person with his work related or non-work related problem"
<i>Conscientiousness</i>	"Discretionary behaviours on the part of the employee that go well beyond the minimum role requirements of the organization in the areas of attendance, obeying rules and regulations, dedication at work, follow the instructions of the head when his absent and so forth"
<i>Sportsmanship</i>	"Discretionary behaviour in which employee show willingness to tolerate the inconveniences of work situation without complaining"
<i>Courtesy</i>	"Discretionary behaviour on the part of an employee, action aimed at preserving harmony and preventing problems with others"
<i>Conservation of organizations' property</i>	"Discretionary behaviour which refers all voluntary actions that preserve university properties"
<i>Self-training</i>	"Discretionary behaviour employee engages in to improve their knowledge, skills and abilities"
<i>Loyalty</i>	"Discretionary behaviour which includes creating good will to the university, and defending it against any threats"

Source: Created by the authors based on Rauf and Kumar (2015, p. 130)

Research on OCB in different cultural contexts shows that three Western dimensions – altruism (helping), civic virtue and conscientiousness – are similar to other cultural contexts (Chinese, Indian and Sri Lankan).

**OCB Dimensions in the Context of the Industry 4.0 Revolution.** Formally, the beginning of the Industry 4.0 revolution dates to the year 2011, when it was introduced during the Hannover Fair after the German government presented a high-technology strategy project promoting the computerization of manufacturing. The previous Industry 3.0 revolution was characterized as mass product manufacturing, and Industry 4.0 is known as high productivity smart manufacturing. The 5 main pillars of the smart manufacturing concept are artificial intelligence, big data, cloud computing, cybersecurity and the Internet of things. Thus, the Industry 4.0 revolution leads to automation and digitalization of technologies which transform not only value chains but all business processes. Ejsmont (2021) stated that each industrial revolution changes not only technologies but all economic and social aspects, including employees' working conditions. Moreover, according to findings by Ali and Xie (2021), implementation of Industry 4.0 has an impact on organizational behaviour and

corporate culture. There is strong evidence that widespread automation and AI change working roles and required skills of employees (Ammirato et al., 2023), creating new tasks and cancelling others. Also, new technologies improve the ways of monitoring and measuring employee performance, which in turn creates an opportunity to implement an advanced scale of individual KPIs (key performance indicators) based on AI. However, Industry 4.0 may have a negative impact on employees in terms of overloading from increased work pressure and stress from fear of being replaced by robots (Aderibigbe, 2021).

OCB is a multidimensional context-related concept which defines employees' behaviours which are outside of formal working role requirements and not recognized by a reward system but promote the efficient and effective functioning of the organization. In the existing literature, there are studies which show different OCB dimensions in different cultural contexts, but there is little research on OCB dimensions in different industrial revolution contexts. Though in previous literature all authors agree that Industry 4.0 has an impact on working roles and job requirements, there is no agreement about changes in OCB dimensions in the new era. Here are some assumptions regarding new OCB dimensions which should evolve in smart manufacturing:

- New technologies require not only acquiring new skills but also a willingness to share knowledge with colleagues and thus contribute to a culture of learning and improvement.
- Rapid changes and disruptions in work processes lead to an increase in stress and, thus, such behaviours as flexibility and adaptability would help to smooth the process of organizational transition.
- Innovations need proactive problem-solving behaviours, which manifest themselves as employees take the initiative in identifying and proposing solutions to problems for which they are not responsible.
- Increased use of data may impact both employee privacy and organization cybersecurity, but ethical behaviour on the part of employees would help to prevent data usage violations.

As mentioned above, Industry 4.0 is a high-technology strategy presented by the German government to increase the competitiveness of local businesses in the global market. Similar to this top-down initiative, in 2021 the European Commission called for the Industry 5.0 revolution (Xu et al., 2021). This call was a result of discussions among researchers and practitioners about societal challenges caused by changes as a response to the Industry 4.0 revolution. According to Breque et al. (2021), the three core values of Industry 5.0 are human-centricity, sustainability and resilience, and while Industry 4.0 could result in an imbalance in society (Raja Santhi and Muthuswamy, 2023), Industry 5.0 aims to make workplaces sustainable and the world a better place to live. Kemendi et al. (2022, p. 211) believe that "Industry 5.0 sets out new ways of working direction that reshape manufacturing process and job set-up...". Thus, in line with the three core values of Industry 5.0, the following distinctive OCB behaviours may emerge in this context:

- The human-centric approach may bring about such citizenship behaviour as making propositions to supervisors on work arrangements which would lead to a better work-life balance.

- Sustainability may encourage employees to make innovative proposals aimed at developing new products from recyclable materials and new processes to reduce their environmental impact.
- Resilience as a way to prevent damage from disruptions may motivate employees to be proactive in identifying a potential risk and to create with other employees such a work environment where they feel free to speak about their concerns, addressing potential problems.

Overall, while Industry 4.0 and Industry 5.0 change business processes and work environments, OCB remains important. The dimensions of OCB should be aligned with the context of technology-driven Industry 4.0 and value-driven Industry 5.0. While the core dimensions may remain the same, the new behaviours should be included in the OCB scale to respond to the requirements of the Industry 4.0 and Industry 5.0 revolutions.

## CONCLUSIONS

Industry 4.0 and Industry 5.0 have already dictated or will start to dictate new rules for all industries on all levels. If manufacturing companies accept the need to change according to a new environment, they will be able to boost productivity, cut costs, and improve performance, all at the same time. Organizational citizenship behaviour consists of activities which are not role-prescribed and rewarded systematically.

1. OCB as individual behaviour which in the aggregate promotes the efficient and effective functioning of an organization is influenced by the Industry 4.0 and Industry 5.0 revolutions because new technologies and focus on values change the nature of citizenship behaviour too.
2. These types of “extra-role” behaviours target either individuals (OCBI) or the organization (OCBO), but as a result, both OCBI and OCBO have a positive impact on organizational effectiveness through an improved organizational socio-psychological environment.
3. Though there is enough evidence that the OCB scale is changing according to cultural context, little research has been done in the new manufacturing workplace context of the Industry 4.0 and Industry 5.0 revolutions.
4. Thus, future research needs to aim at the validation of OCB dimensions according to changes caused by Industry 4.0 and Industry 5.0 requirements.
5. This could help scholars to use an OCB scale which is updated according to the Industry 4.0 and Industry 5.0 context and practitioners to better understand the extra-work-role behaviours that are most relevant for organizational effectiveness in the new era of work.
6. This research is limited to reviewing the definition and dimensions of OCB and, thus, no analysis regarding OCB’s antecedents and implications, including its mediating and moderating role, is provided.



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