Understanding Future Leaders: How Are Personal Values of Generations Y and Z Tailored to Leadership in Industry 4.0?

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Abstract: This study combines two main challenges for organizations today, as it examines the alignment between personal values of future leaders and the values needed in the Industry 4.0 workplace. Based on the movement of the organizational environment toward a more multidisciplinary, open, collaborative and multicultural environment, we presuppose that the Industry 4.0 workplace requires a more benevolent, universally oriented and generally self-transcended leaders. Drawing upon Schwartz’s value theory, we examine the impact of Generations Y and Z’s personal values on their leadership inclination. The results from the survey of 371 young participants from Generations Y and Z reveal that self-enhancement (i.e., power and achievement), openness to change and conservation values most significantly affect leadership inclination. Meanwhile, benevolence, universalism and general self-transcendence values—cornerstones of the Industry 4.0 workplace—show negative effects on leadership inclination in the frame of the Industry 4.0 workplace. This indicates a poor fit between the values of future leaders and the values of the Industry 4.0 workplace. These findings have significant implications for human resource management in future organizations and contribute to the understanding of future leaders. In addition, the findings can help organizations to manage sustainable workings in an Industry 4.0 environment.

Keywords: personal values; future leaders; Industry 4.0; Gen Y; Gen Z; organizations; Industry 4.0 workplace; Slovenia

1. Introduction

Organizations worldwide are currently at a turning point regarding their future workings. They are implementing the principles of Industry 4.0 [1,2], while also facing the arrival of new generations of employees born after 1980. These employees belong to Generations (Gen) Y and Z, among which are also future leaders assuming leadership positions [3]. Both of these novelties have an important role in changing current organizational practices, as well as organizational workings and behavior. First, the transformation of organizational workings with the implementation of advanced technologies and diverse business practices typically associated with Industry 4.0 comprehensively impacts internal and external business processes [4]. Second, due to the massive changes that the implementation of Industry 4.0 brings, management and leaders’ behavior should adhere to certain personal values, which are emphasized in new circumstances [5].

An Industry 4.0 environment is rapidly forming with the adoption of new principles of social and organizational philosophies that are considered to be more sustainable in terms of nature and human systems [6–10]. It is, however, predicated on technological advances [2], but this impacts other areas of organizational workings; thus, Industry 4.0, in essence, represents a more collaborative,
multicultural and multidisciplinary organizational environment [11–14]. Therefore, there are some rising concerns about how future leaders’ attitudes and behaviors will coincide with what it is expected from future leadership positions in organizations [15,16]. The literature indicates that Gen Y, formally known as the millennials, emphasize, most of all, values that promote self-enhancement in terms of valuing money, promotion, advancement at the workplace, fame and power [17–19]. Gen Z, raised in a similar social environment, have also been found to hold similar and even the same values most prominently [20]. Looking through the prism of which personal values are important for prospective future leaders, it seems that there is a mismatch between the personal values (and subsequent behavior) of future leaders and the values required by future organizations that have implemented Industry 4.0 principles.

This challenges the often-prevailing general opinion that younger generations are “born with technology”, which implies that they should be more ready and more suited to work in organizations that have implemented the principles of Industry 4.0 than any other previous generation [19] that do not have technology in their “DNA.”

If organizations want to develop and assess the leadership potential of their future employees from younger generations, as well as to ensure a good fit between their values and the prevalent values of the Industry 4.0 workplace [21], they first have to comprehensively understand the personal values of their future leaders. However, the role of the new generation’s leaders and their personal values are, in the context of Industry 4.0, not well understood in the literature.

The existing literature has, thus far, mainly addressed the personal values of current professionals and leaders [22,23], the values across generations at the workplace [24] and the importance of personal values for leadership in general [25–27]. Prior studies of leaders’ personal values typically focused on the current professionals in organizations, while only a few studies addressed future professionals from Gen Y and Z [3,18–20]. Yet, this literature is limited, as personal values are typically assessed for professionals in organizations across diverse cultural contexts, revealing a lack of studies focusing on the personal values of younger generations, as future leaders.

Further, turning to Industry 4.0, the current studies of Gen Y and Z employees do not typically include the organizational circumstances of Industry 4.0, which present the most important challenge for organizations worldwide [8]. Here, leadership is especially important from a strategic viewpoint [8,28], but it is evident that organizations do not plan for it as much as they should [29]. Younger generations, as future professionals as well as leaders, are currently not considered as an important challenge in the context of Industry 4.0. For instance, a comprehensive set of challenges that Industry 4.0 brings to organizations in the human resource cluster focuses mainly on the development of the workplace of the future, qualifying employees and building their digital capabilities [30].

As seen above, the role of future employees, as well as leaders, in the Industry 4.0 workplace is largely ignored. Knowing whether future leaders are open and benevolent toward others or, in contrast, focused on self-enhancement and conservation can indicate what type of organizational environments they will likely create, and, also, whether such environments are likely to be successful [31,32]. Yet, the current literature does not provide evidence on how the personal values of the new generation of employees support their leadership inclinations under the circumstances of Industry 4.0. Furthermore, there is no evidence regarding how the personal values of future leaders coincide and support organizational workings in the environment of Industry 4.0. All of the above calls for a deeper examination of the significance of future leaders for organizations within Industry 4.0. Furthermore, one of the more important tasks of leaders in nowadays organizations also concerns sustainable development [8], which is, importantly, driven by the personal values [33–35] that are at the center of our attention. Accordingly, we may ask how future leaders’ values and the values of the Industry 4.0 workplace can affect the sustainable development and workings of organizations, since it was found that for instance millennials put very little emphasis on social responsibility issues [3].

This study is unique, as it combines two considerable and often overlooked challenges in nowadays organizations. The main aim of this study is first to assess the personal values of future leaders from Gen
Y and Z and to gain insight into their future behavior in organizations. Next, our goal is to apply these cognitions to analyze whether future leaders are in line with the needs and expectations of the Industry 4.0 workplace and, what is more, how are they likely to shape the future organizational environment.

By testing the postulated hypothesis and establishing the relationships between leadership inclination and personal values, we make three distinct contributions to the literature and business practice. First, we observe the personal values that prospective Gen Y and Z leaders prioritize. Second, by utilizing cognitions from planned behavior theory [36], we propose a set of likely outcomes regarding how prospective future leaders behave and, thus, how well they fit with and shape the future workplace of Industry 4.0. Third, we outline several steps that organizations should take when selecting future leaders, and also determine in what way they can change their environment in order to secure sustainable development in Industry 4.0.

2. Theoretical Background and Hypothesis Development

This section first examines the concept of personal values, where the focus is on Schwartz’s theory of personal values [37]. Next, the importance of personal values for leadership is outlined, where the concept of leadership is examined. Further, we outline the role of leadership under the circumstances of Industry 4.0. The theoretical section is concluded by combining the cognitions regarding personal values, leadership, and Gen Y and Z to provide insight into the values of future leaders in the context of the Industry 4.0 workplace.

2.1. Personal Values

Personal values determine how a person sees the world [38,39]. Values can be considered primarily as beliefs and desirable goals, where they may represent a standard or criterion of expected behavior [37,40,41]. They also represent an individual’s implicit or explicit desires, which can influence the type of means or actions that the individual will select to accomplish his or her goals [42]. By extension, they can be taught of as a cognitive filter [43].

An individual’s values and, by extension, his or her beliefs, attitudes and behaviors vary depending upon the subjective importance and the different internal and external factors [19,36,37]. Building on these theoretical findings (Figure 1), personal values can present a starting point from which a person’s attitudes and behaviors originate [36,41,44]. They are an important behavioral predictor because they reflect deep and abstract personal perceptions of the right behavior and are its main motivator [37,45]. However, it should be stated that the behavioral outcome depends upon the degree of importance a person assigns to the particular value, which is directed by a person’s goals, beliefs, motivation, etc. [19,37].

![Figure 1. The process from personal values to future (planned) behavior. Source: Summarized from the theory [36,44] applied in [43].](image)

Among others, Schwartz [37,46–48] laid the currently most used groundwork for the basic structure of personal values. He defined 10 types of values, which constitute subdimensions and are different with regard to a person’s motivations. Broad-spectrum orientations of these subdimensions include: (1) Self-direction, based on an individual’s independent thought and action; (2) stimulation, which refers to an individual’s orientation toward exciting and challenging life, as well as novelty; (3) hedonism, which is connected with self-gratification and pleasure; (4) achievement, in the context of personal success, which is based on an individual’s competencies within relevant social standards; (5) power, driven by prestige and social status and the need for control and dominance over people; (6) security, which refers to achieving safety, stability and harmony in different areas, e.g., society, relationships and self; (7) conformity, considered is a sense of non-action toward others, with the purpose of not harming people and obedience toward the norms of society; (8) tradition, which explains
an individual’s connection and relationship with his culture, tradition and religion; (9) benevolence, which is oriented toward the welfare preservation or enhancement of a group of which an individual is a member; and (10) universalism, which reflects the good intentions, tolerance and appreciation toward nature and other people.

According to Schwartz’s model [37,41], these 10 types of values can form higher-order dimensions. Namely, self-transcendence values that describe an individual’s benevolence and universalism values. Self-enhancing values are focused on power, on hedonism, in part, and on the achievement of goals, sometimes even with no regard as to the means. Openness to change encompasses the values of stimulation, self-direction, and, partly, hedonism. Lastly, conservation refers to the values connected to security, conformity and tradition. Self-enchanting values and openness to change reflect personal interests, where self-transcendence and conservation values reflect the social interests of a person [37]. Still further, the personal values of openness and self-transcendence encompass an individual’s tendencies that describe personal growth and freedom from anxiety, whereas values of self-enhancement and conservation describe self-protection and anxiety avoidance [48].

Herein, we utilize higher-order dimension values for the purpose of discussion, as they offer the possibility of greater clarity and have more exploratory power. We also consider more recently discovered combinations that the above-outlined 10 types of personal values take with regard to human motivations and behavior [41].

As seen, due to its practical usefulness, the concept of personal values can be applied in many different social and humanitarian sciences [49]. Although the research into personal values has its roots primarily in social psychology, the concept has also been considered by management scientists in order to better explain the nature of employees’ behavior in organizations from various aspects [19,24,50–53], where a large proportion of the literature deals with the impact of personal values on leadership.

2.2. The Role of Personal Values in Leadership

The conceptual idea of leadership has been extensively studied for the last century within different fields, mainly in social psychology, business and economics. However, in the past, studies often lacked the meaning and context for practical application and did not address cognitive, social and interpersonal viewpoints [16,54]. However, these gaps are being explained in more contemporary literature, in the sense of describing the meaningful practical implications that leadership has on organizations [55,56]. Leadership is a difficult concept to comprehensively define [57]. For the purpose of this study, we can define it as a person’s efforts toward the realization of organizational goals. Leadership, as a function, thus enables organizations to set and achieve said goals [58]. By extension, leaders provide the right direction in this process, as well as the tools, support and motivation necessary to ensure that all activities are in line with the goals of an organization [54,56]. Furthermore, leadership can also be considered as a process of influence on others [16], but this influence is only (positively) effective if the values of the leaders are in line with the values of the employees [59].

The personal values that leaders hold directly result in their traits, attitudes and leadership styles [60,61]. Leadership styles can therefore be understood as a systematic pattern of the standard and continuous behavior of a leader [62], which has direct implications on the shaping of organizational culture [55,63]. Personal values have been recognized by many scholars as an important driver of leadership behavior [27,50,64]. A leader’s personal values consequently also help to shape a broader organizational environment [50,65], and thus an organization can be seen as a reflection of its top managers [31].

2.3. Leadership in Industry 4.0

Industry 4.0 has not yet been comprehensively defined [66]. To date, it is understood that Industry 4.0 is a movement based upon the emerging digital technologies that are being implemented into organizational workings, especially in manufacturing organizations [6]. These transformational changes bring a plethora of challenges for organizations, ranging from issues with technological
implementation [67,68] to issues with employees within human resources management [30]. Industry 4.0 technologies on an operational level encompass mainly digitalization-based concepts and automation. However, the main aim of Industry 4.0 implementation is to create cyber-physical systems, to implement artificial intelligence, and thus to achieve autonomous and smart manufacturing and broader business processes [69–71].

The subsequent changes are, however, not only focused on hard, technology-related aspects, but rather, it is expected that the organizational environment will also become more multicultural, multidisciplinary, agile, collaborative, open, etc., thus also impacting soft people-related aspects [11–13]. As a result of these changes, the question of which values, traits and attributes leaders should possess or put into the forefront within the Industry 4.0 workplace becomes relevant.

Leaders will drive and create the vision, purpose and position of future organizations in the digitalized global economy [50,72], and entire organizations will reflect their personalities in the way they work [73]. Still more important, beneficial organizational outcomes are heavily influenced by a leader’s cognitive and value characteristics [31]. In terms of understanding the crucial importance of leadership, some indications of the needed traits and behaviors of transitional leaders are well documented. For transitional leaders, they must have the ability to recognize their emotions [74], which is connected to openness, and to have proactive personalities [5], connected to values of self-enhancement. Here another practical question emerges of whether such behavioral characteristics fit with the needs of the future organizational environment.

Turning to the needed leadership characteristics in the frame of Industry 4.0, ideas about the role of future leaders in practice are also emerging. Herold [75] outlines that the future so-called “networked leaders” should have several key orientations. The orientations of leaders should be mainly focused on managing the diversity, agile leadership and ethical responsibility of leaders. Leaders, under the circumstances of the Industry 4.0 workplace, should, therefore, be agile and adaptive in terms of learning, working cross-culturally and cross-generationally, etc. Future leaders should be ethically responsible and, in this sense, enlightened [75]. Along with agile abilities, leaders should also be open to change and take risks in order to adapt and implement changes and, by extension, build a new organizational culture [76,77]. It is also outlined by [11] that Industry 4.0 will require managers and leaders to change their management style from power-driven to value-driven. This is because of the more diverse and dynamic workforce, which indicates a need for less power-driven leaders, but requires more universal and benevolent individuals as leaders. Furthermore, leaders will have to develop and emotionally engage other employees, as well as be culturally and self-aware [76], which also demands high self-transcendence, i.e., universal and benevolent personal values. Putting universalism values into the forefront would also be beneficial for achieving the goals associated with sustainable development of future organizations, since personal values are an important predictor of a leader’s attitudes toward sustainable development [34]. The identified values, which are needed to work in the Industry 4.0 workplace, especially universalism values, are congruent with the values aimed at fostering the socially responsible behavior of leaders, who, in turn, lead and implement effective and ethical management practices that secure the long-term sustainability of organizations [35].

To sum up, the Industry 4.0 workplace will require leaders with strong benevolent, universal, and, in general, self-transcendence values, who are, by extension, focused on openness, personal growth and the growth of their followers and generally work to be free from anxiety, but remain internally motivated.

2.4. Generations Y and Z and Their Personal Values in the Industry 4.0 Workplace

Current transformational activities in organizations are due to the implementation of Industry 4.0, increasing the awareness of the crucial role that leadership has to play to secure a proper and successful organizational transformation [77,78]. A plethora of studies have already tried to determine the personal values of managers and leaders in history [19,39,55,79,80]. However, originally, in this study, we focus on the “future leaders” from Gen Y and Z, whom we can define as people who will, in the foreseeable future, likely become leaders, due to their perceptive inclinations to become leaders.
Considering that both generations were born some years apart, they were still raised in very similar environments, which is to say, more technologically driven environments, compared to previous generations. This technology-driven notion is especially true for Gen Z [20].

First, millennials, i.e., Gen Y, were born between 1980 and 1994 [20] and have very distinct behavioral characteristics [18,19]. They also have unique personality traits [81] and substantially different preferences toward the importance of personal values and behaviors, compared to the previous generations [82,83]. This generation is far more technologically adept and thus, through their life experiences, have developed different personal values. Millennials are considered to be more flexible, adaptive and hedonistically oriented than, for example, Gen X, who value more stability, hard work and security [84,85], demonstrating their different views of the world. This difference is reflected in millennials’ understanding of how organizations work [18,19,84]. Specifically, millennials in management have different values in the sense that they are more self-centered and less focused on others [17]. They also give more importance to competencies and skills; however, they sometimes have higher moral values with regard to specific issues. Millennials also highly value friendship, love and ambition [86].

Second, Gen Z, born after 1995, shows very little difference in prominent values compared to Gen Y. Comparing these two generations by their work values, they do not show much difference in terms of the ranking of values, especially with regard to self-enhancement and hedonism values [20]. Some research implies that generational differences may well exist between Gen Y and Z [87], in the sense that Gen Z takes already established behavioral patterns by Gen Y to a more enhanced level. Human values systems are evolving with the environment [88], which in the case of the considered generations here, started to evolve into what it is currently during the period when millennials were growing up [19]. The similarity of values can also be grounded based on studies, emphasizing the longevity of values [37,64,89], which implies that no strict line can be drawn between two generations, even though there is a “formally” defined point in terms of the year of birth.

To further describe the relationship between the new generations’ self-enhancing and self-transcendence values, studies suggest that in these generations, personal values connected to money and fame are more prominent than values emphasizing morals, altruism, empathy, concern for others, etc. [17–19]. Interestingly, some studies have found that, specifically, millennials may value time over money, suggesting, among other things, a strong prevalence of hedonism and self-direction [81,90,91]. With regard to their readiness to join the workforce, some arguments have been made that the high moral and ethical values that have emerged in some studies make especially millennials very prepared to enter today’s business environment [19,43], but their high expectations in terms of career advancement do not [17].

Based on the cognitions that are recognized in two distinct fields of business studies, we can presuppose the following hypothesis:

**Hypothesis 1.** There is a poor fit between the personal values of future leaders from Gen Y and Z and the values associated with the workplace of Industry 4.0.

### 3. Methodology

#### 3.1. Instrument

The questionnaire used in this study was, in the first part, focused on demographic variables, specifically the respondents’ age, gender and place of residence. In the second part, we used Schwartz’s refined value theory [41,48] to outline the 25 most important values. Personal value measurement systems differ in their nature and purpose, and there are a variety of different scales and number of items considered when determining personal values. As younger generations are found to be impatient [17], we selected a short and refined version of the value survey with regard to the number of variables and the length of the scale. Indeed, short questionnaires have also been tested on students
and professionals in multiple countries around the globe \[41,48\]. In the third part, we used cognitions from the study of millennials’ perspectives on leadership \[92\] to design questions that measure the new generations’ leadership inclinations.

3.2. Sample and Procedure

The sample in this study consisted of young Slovenian adults, who can be categorized by their age into either Gen Y or Gen Z. The questionnaire was presented in the form of an online survey, and it was spread among the population using convenience sampling and the snowball method in 2018. We used the social networks of the authors, through which potential respondents were addressed to fill in the survey and were also asked to distribute the link to the online survey to their peers. Therefore, the obtained responses represent a convenience sample. The sample contained 371 complete responses, which approximates the sample sizes in studies of student values using the same instrument \[41\]. Regarding the sample size, it was large enough for the analysis to draw meaningful conclusions from the results \[93\].

The sample demographics show the following sample structure. The age range was from 16 to 35 years old, with an average age of 22.62 years and a standard deviation of 2.85 years. With regard to generation groups, 77.1% were Gen Z respondents and 22.9% were Gen Y respondents. Meanwhile, there were 42% male and 58% female respondents. With regard to the respondents’ place of residence, 41.5% were living in a large city and 58.5% in suburban towns or the countryside.

3.3. Measures

To measure personal values, we used the refined theory and the value survey \[41\]. We measured personal values based on the 25 statement questions, variations of which are proposed in the literature \[37,41,48\]. We used a 6-point interval scale, spanning from 1 (i.e., this is nothing like me) to 6 (i.e., this is very much like me). In previous studies, 6-point scales have also been used to measure the personal values of students in Germany, Israel, Switzerland and Turkey \[41\].

We performed a principal component factor analysis with varimax rotation, entering 25 individual values into the IBM SPSS 25 software. The results show an 8-factor structure that resembles the meaning of the more recently established and the more connected and interrelated value dimensions predicted in the refined version of Schwartz’s value theory \[41\]. We formed the following groups of values: (1) security-conformity \((\alpha = 0.815)\), (2) achievement-power \((\alpha = 0.897)\), (3) universalism-harmony \((\alpha = 0.779)\), (4) tradition-conformity \((\alpha = 0.870)\), (5) self-direction-stimulation \((\alpha = 0.832)\), (6) universalism-benevolence \((\alpha = 0.823)\), (7) universalism-tolerance \((\alpha = 0.840)\) and (8) hedonism \((\alpha = 0.632)\). The factor analysis was reliable enough that we were able to proceed with further investigations (KMO = 0.823; BTS = 2028.42; \(p < 0.001\); variance explained = 78.26%). Thus, enough reliable variance was explained to use the higher dimensional personal value constructs in testing the hypotheses and was comparable to that achieved in studies using the same instrument \[41\]. A refined theory of personal values \[41\] predicted that certain values will converge onto the same factor if they are similar with regard to an individual’s motivation. This was also found in our factor analysis, where we observed that the values within higher orders of conceptualization (i.e., self-enhancement, openness to change, conservation and self-transcendence) tend to group and form more precise personal values.

The measurements regarding perceived leadership inclination were based on the investigations of how members of Gen Y most often perceive and define leadership in their own words \[92\]. We asked the respondents to rank, on a 6-point interval scale spanning from 1 (i.e., this is nothing like me) to 6 (i.e., this is very much like me), two statement questions: “I see myself as a leader in the future” and “One of my professional goals is to become a leader”. The Cronbach alpha for this scale was 0.693.

The Cronbach alpha values for hedonism and leadership inclination were below 0.700, but as agreed in social sciences, there is enough reliability and internal consistency for factors above 0.600 to make meaningful predictions \[25,94\].
3.4. Research Design

Our research design had two distinct steps. First, the elements of the descriptive statistics and the zero-ordered correlations between the variables of interest were outlined. Second, we performed a hierarchical regression analysis to observe the relationships between personal values and leadership inclination, with $\alpha < 0.005$ probability. Leadership inclination was used as a dependent variable. To confirm the measurement model, we subjected the hypothesized model to the goodness of fit test. We used maximum likelihood estimation procedures with measurable variables in AMOS 21 software. The hypothesized model displayed an adequate fit with the data ($\chi^2 (N = 371, \text{df} = 34) = 77.070, p < 0.001; \text{GFI} = 0.968; \text{CFI} = 0.961; \text{RMSEA} = 0.059; \text{PCLOSE} < 0.05 (0.000)$) [95].

According to the outlined theory, we did have two generations of new generations’ participants in the sample, with little implied difference in personal values [20]. However, we also performed an independent samples $t$-test using IBM SPSS 25 software to see whether there were differences in the personal values and leadership inclinations among Gen Y and Z. The results show significant differences only with regard to the tradition-conformity values ($t = -2.106; p < 0.05$), while there were no significant differences in the other personal values and leadership inclinations. Minor differences in the demographic characteristics of respondents are acceptable when comparing groups [25,96]. We thus treated the sample as homogeneous in the analysis, as only minor differences existed.

We further tested for multicollinearity as a first step to determine the presence of common method bias [97]. The tolerance values ranged from 0.673 to 0.768 and the VIF values from 1.294 to 1.485, indicating that there were no multicollinearity issues [98]. We also further tested for common method bias, as we used the same instrument for the dependent and independent variables. All 27 items, 25 from the personal values and 2 from the leadership inclinations, were loaded onto one factor with no rotation in SPSS 25, which was performed to determine the value of common method variance [97]. The results indicate that there was no common method bias, as the new common latent factor explained 33% of the variance, well below the recommended 50% [99]. Finally, the correlations among the variables of interest in this study (Table 1) were all well below any extremely high values (i.e., $>0.90$), which could indicate the possibility of common method bias being present [94]. We can therefore conclude that the possibility of common method bias in this study is low.

4. Results

4.1. Descriptive Statistics

Table 1 shows the mean values, standard deviations and zero-ordered correlations among the variables in this study.
Table 1. Descriptive statistics and correlations between the variables for hierarchical regression analysis.

| Variable                      | M    | SD   | 1   | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    |
|-------------------------------|------|------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1. Age                        | 22.62| 2.85 | 1   |       |       |       |       |       |       |       |       |       |       |
| 2. Gender                     | 1.26 | 0.45 | -0.008 | 1     |       |       |       |       |       |       |       |       |       |
| 3. Place of residence         | 1.58 | 0.49 | 0.010 | 0.059 | 1     |       |       |       |       |       |       |       |       |
| 4. Security-conformity        | 3.98 | 1.01 | 0.016 | 0.159 ** | 0.086 | 1     |       |       |       |       |       |       |       |
| 5. Achievement-power          | 4.67 | 1.02 | -0.031 | 0.010 | -0.016 | 0.378 ** | 1     |       |       |       |       |       |       |
| 6. Universalism-harmony      | 3.63 | 0.93 | 0.015 | 0.212 ** | 0.064 | 0.209 ** | 0.066 | 1     |       |       |       |       |       |
| 7. Tradition-conformity       | 3.59 | 1.23 | 0.088 | -0.006 | 0.157 ** | 0.476 ** | 0.322 ** | 0.231 ** | 1     |       |       |       |       |
| 8. Self-direction-stimulation | 4.28 | 0.97 | 0.020 | -0.016 | -0.044 | -0.41 | 0.229 ** | 0.118 * | -0.009 | 1     |       |       |       |
| 9. Universalism-benevolence   | 5.00 | 0.87 | 0.118 * | 0.147 ** | 0.059 | 0.232 ** | 0.208 ** | 0.387 ** | 0.220 ** | 0.242 ** | 1     |       |
| 10. Universalism-tolerance    | 5.26 | 0.74 | 0.019 | 0.079 | 0.054 | 0.274 ** | 0.234 ** | 0.357 ** | 0.265 ** | 0.256 ** | 0.368 ** | 1     |
| 11. Hedonism                  | 4.87 | 0.88 | 0.009 | -0.015 | -0.096 | 0.149 * | 0.317 ** | 0.168 ** | 0.043 | 0.395 ** | 0.279 ** | 0.290 ** | 1     |
| 12. Leadership inclination    | 3.35 | 0.94 | 0.049 | -0.101 | -0.047 | 0.312 ** | 0.585 ** | -0.171 ** | 0.307 ** | 0.223 ** | -0.007 | 0.012 | -0.104 * |

Notes: ** p < 0.001, * p < 0.05; sample size is 371.
In Table 1, the way in which the considered variables in this study are represented and connected can be observed. First, the descriptive statistics show that the highest scored personal values of Gen Y and Z are the universalism-tolerance values ($y = 5.26; \sigma = 0.74$), followed by the universalism-benevolence values ($y = 5.00; \sigma = 0.87$) and the hedonism values ($y = 4.87; \sigma = 0.88$), which is in contrast in terms of priority with some previous studies of students’ values [17,18]. Next follows the achievement-power values ($y = 4.67; \sigma = 1.02$), the self-direction and stimulation values ($y = 4.28; \sigma = 0.97$), the security-conformity values ($y = 3.98; \sigma = 1.01$), the universalism-harmony values ($y = 3.63; \sigma = 0.93$) and the tradition-conformity values ($y = 3.59; \sigma = 1.23$). Leadership inclination has the lowest score, even though it was measured on the same scale ($y = 3.35; \sigma = 0.94$). This shows that leadership inclination is not very prominent among younger generations. Second, with regard to the correlation analysis, the demographic variables first do not show any significant correlation with leadership inclination and only a few significantly positive low correlations with specific personal values. For instance, age has a weak positive association with the universalism-benevolence values, implying that the older the respondent, the more important the value—although this was not found with an independent samples $t$-test with regard to generational differences. Most of the personal values, on the other hand, show significant low-to-moderate correlations with leadership inclination. Negative correlations were, in this regard, found for the universalism-harmony and the hedonism values. Statistically insignificant relationships were found for the values of universalism-benevolence and universalism-tolerance.

4.2. Regression Analysis

Here, we considered the relationship between personal values and perceived leadership inclination, as shown in Table 2. First, Model 2 shows that all personal values are significantly associated with leadership inclination. Specifically, the values of achievement-power are positively associated with leadership inclination. The same holds for the values of tradition-conformity, security-conformity and self-direction and stimulation. Negatively associated values with leadership inclination were found for universalism-harmony, universalism-benevolence, universalism-tolerance and hedonism.

| Variables                  | β     | t    | β     | t    |
|----------------------------|-------|------|-------|------|
| 1. Age                     | 0.048 | 0.930| 0.060 | 1.551|
| 2. Gender                  | −0.098| −1.884| −0.061| −1.548|
| 3. Place of residence      | −0.042| −0.801| −0.052| −1.335|
| 4. Security-conformity     | 0.172 | ***  | 3.684 |      |
| 5. Achievement-power       | 0.505 | ***  | 11.334|      |
| 6. Universalism-harmony    | −0.197| ***  | −4.510|      |
| 7. Tradition-conformity    | 0.168 | ***  | 3.664 |      |
| 8. Self-Direction-stimulation| 0.224 | ***  | 5.182 |      |
| 9. Universalism-benevolence| −0.094 | *     | −2.106|      |
| 10. Universalism-tolerance | −0.117 | **    | −2.626|      |
| 11. Hedonism               | −0.091 | *     | −2.056|      |
| N                          | 371   |      | 371   |      |
| F                          | 1.754 |      | 30.868| ***  |
| R²                         | 0.014 |      | 0.486 |      |

* Standardized regression coefficients are shown. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Furthermore, the results from Models 1 and 2 indicate that the demographic variables (i.e., age, gender and place of residence) do not have any significant implications in terms of the results. From an explanatory standpoint, it is significant that 48.5% of leadership inclinations can be explained by the orientation of personal values.
Based on the importance of personal values for Gen Y and Z, it can be observed that universalism values are highly appreciated, but the relationships between leadership inclination and personal values in the hierarchical regression model in Table 2 reveal a negative association between universalism and leadership inclination. These findings allow us to confirm our hypothesis, since the prevalent values of future leaders do not entirely match the requirements of the Industry 4.0 workplace.

5. Discussion

The results of the analyses show expected, but nonetheless peculiar personal value orientations of prospective future leaders. Considering the higher value dimensions for discussion [48], prospective future leaders show tendencies toward self-protection and anxiety avoidance. This indicates that, for them, self-protection from emotional hurt is of the utmost importance [100]. They also display general self-protecting behavior, which is not always in the best interest of an organization [101]. Anxiety avoidance is also prominently displayed [41]. This may indicate that they would rather avoid difficult and stress-inducing social or job-related situations than resolve the issues on the spot. In the context of the future business environment, evolved around Industry 4.0, which will be more collaborative and multicultural [102], such approaches to problem-solving can create “leaders with issues” and may be harmful to organizations [103]. Leadership is a complex and multidimensional phenomenon [16,59,63,104], but fundamentally, it refers to how a person based on personal perceptions leads their followers [105]. Perceptions of the world are shaped by personal values, and thus, it is not surprising that fundamental value characteristics shape leadership behavior [48,106]. Leadership is also influenced by various drivers, such as personal characteristics [50], organizational settings and external environments [107]. It is significant from a theoretical standpoint, however, that a large portion of variance in personal values is explained by leadership inclination—almost up to 50%—indicating the substantial role of personal values in the leadership inclinations of new generations. Looking through the prism of the Industry 4.0 workplace, it is expected that future leaders who are entering into organizations are well aligned with the requirements of “digitalized organizations”, due to the fact that they are in constant touch with technology from “the cradle” [19], as opposed to leaders from previous generations [24,65].

Surprisingly, regarding the importance of personal values for younger generations, as well as those values required by the Industry 4.0 workplace, there seems to be a good fit, since universalism is especially important in the Industry 4.0 workplace and is prominently appreciated among the respondents in our study. However, with regard to the associations between the personal values of younger generations and their leadership inclinations, we can identify a poor fit between the values of future generations’ leaders and the values of the Industry 4.0 workplace. Furthermore, this strengthens the idea that Industry 4.0 is also subject to sociocultural evolution rather than only evolution based on the advances in technology [4,8].

With regard to the high significance of self-enhancing values, the tendency for prospective future leaders to control and dominate people and to seek personal success is to be expected [37,46]. These values indicate proactive personality traits, which are of importance with regard to a leader’s success [31]. However, the self-enhancing values and connected behavior of future leaders would not be at the forefront at the workplace of Industry 4.0 [75]. This may be attributed to the trend of global collaboration that Industry 4.0 is emphasizing, where, for instance, learning factories will be based more on teamwork than on individual work [108]. This contradiction with the needs of Industry 4.0 may have some implications for organizations, where younger generations, in general (especially in Western economies), display strong values connected to power and achievement [3,18,19,83]. Behavior connected to dominance and self-enhancement is responsible for leaders emerging from the population, but in the context of organizational workings, this behavior is not effective [109]. The future workplace of Industry 4.0 needs leaders who are more benevolent, focused on their followers and on their employees’ needs and who project more prominently the values of the younger generations. Furthermore, the Industry 4.0 workplace also needs universally oriented leaders, who have developed emotional intelligence, self-awareness and high standards of ethical behavior [11,55,75–77].
High appreciation of universalism values will also contribute to the improvement of sustainable development in future organizations [110].

The prospective future leaders are also more open to change. Such leaders will, on the upside, be able to create a culture where innovation and creativity can be fostered [55]. The digital era economy and, consequently, Industry 4.0 are, to a large extent, driven by creativity and innovation; thus, these values from future leaders fall well in the spectrum of the needs of future business environments [102]. The prospective future leaders are also more conservative than the others. It is only natural that, as leaders, they would be more inclined toward stability and safety in the organization they would lead [37]. However, in the context of managing a dynamic multicultural and global Industry 4.0 organizational environment, restraining from action may not be the right approach. Industry 4.0 also encourages flat organizational structures [111], but leaders with high conservation values prefer more hierarchical structures [46]; thus, this fit may not be the best. However, the ability to be able to utilize, for example, traditional leadership practices to provide security to the people and to the data of organizations in the future industry is very important [76,77]

5.1. Theoretical Implications

This study has the following theoretical implications. First, building upon the importance of personal values for leadership in organizations [16,31] and in the new workplace of Industry 4.0 [4], our study contributes to the literature by determining key personal values that will be required for leaders within the workplace of Industry 4.0. Second, we provided evidence on how the personal values of younger generations support their leadership inclinations under the circumstances of Industry 4.0. Third, we found a poor fit between the personal values of prospective future leaders and the requirements of the workplace of Industry 4.0, not previously outlined in the literature.

5.2. Implications for Practice

Employing leaders from the new generations alongside current leaders already presents a considerable challenge for organizations [15,19,112]. What is more, considering the poor fit between the values of future leaders and the requirements of the workplace of Industry 4.0, additional issues may arise due to the value discrepancies in organizational practice. Human resources managers, as well as other managers, should recognize the role of the personal values of future leaders in the workplace of Industry 4.0 and should tailor and “refresh” current human resource practices.

First, the tendency of prospective future leaders toward self-enhancement and conservation may have some implications in terms of hindering the creation of a future organizational and business environment that will be multicultural, collaborative, agile, open, supportive, etc. Their self-oriented behavior may obstruct certain organizational goals with regard to Industry 4.0 principles. Here, it is especially important to consider that Industry 4.0 philosophies will shape the broader social and natural environment, not only organizations and the social environment will also adopt the same values, where, for instance, the concern for environmental sustainability that is important in the context of Industry 4.0 [8] requires universalism values that are not prominent among future Gen Y and Z leaders.

Second, due to the identified poor fit, organizations will need to further develop young newcomers, with the help of intensive in-service training. Strategic knowledge management is, in the context of Industry 4.0, a recommended management tool to utilize when developing employees [71,113]. Furthermore, utilizing mentoring practices can be especially effective in securing the personal growth of individuals [114,115]. All mentioned approaches should indirectly target changing the priority of the personal values among newcomers, in order to bring to the forefront those values desired at the workplace of Industry 4.0. Certainly, this process can be long-lasting due to the longevity of personal values and the difficulties with regard to changing personal values in adulthood [64].

Third, the negative association of the self-transcendence values (i.e., benevolence and universalism) of future leaders with their leadership inclinations suggests that organizations should design a working environment that will “re-link” this negative link. For instance, the inclusion of future employees
from new generations into social responsibility programs can contribute to the development of the self-transcendence values of universalism and benevolence and can develop associations with leadership inclination. In addition, more emphasis on teamwork than on individual work [108] will enhance these values. Thus, designing work tasks that require team working and broader collaboration will hinder the usage of power values in the frame of individual tasks. In addition, career paths should be designed and prepared in a way that will put to the forefront organizationally beneficial behavior, which will further foster self-transcendence values, instead of destructive behavior driven by self-enhancement values.

Fourth, new generations value leisure time substantially more than previous generations [91,116]. This implies that organizations and managers will need to provide reward systems, motivational polices, and, especially, career path advancement plans, which will be attractive enough that new generations will be willing to substitute leisure time for more money and reputation, as opportunities for advancement in position are of top priority among new generations [17].

Fifth, since the average future leader’s personal values do not correspond well with the new environment, recruiting processes should also include a test aimed at assessing personal values. Thus, employing future leaders with better fitting values will increase the chance for their success and their advancement in the workplace, which is on the pedestal of their work-related preferences [17].

Sixth, looking through the prism of sustainable development, Gen Y, in general, do not value social responsibility [3], but our study revealed that universalism is prominently appreciated. Therefore, focusing on values that support sustainable development and values that are needed for the workplace of Industry 4.0 will also foster sustainable development among future leaders. Although, managers should be aware of current controversies, since universalism values are important among young generations, which positively contributes to the sustainable development of organizations, but their impact on leadership inclination for working in Industry 4.0 is negative.

Finally, the identified poor value fit has important implications for academia. Academia should emphasize the strengthening of the values of students in a way that aligns them with the requirements of future organizations in the digital era. Academia can refresh their curricula and also implement more sustainable courses for the development of business ethics, rather than largely focusing on business performance results in their teaching endeavors. This will help to bring the needed values for Industry 4.0 into the forefront.

5.3. Limitations

This study is not without limitations. First is the question regarding the representativeness of the sample, since convenient sampling was used. Although, we may argue that the sample structure reflects the Slovenian young population. Second, to measure personal values, we used a self-assessment approach, which may have some implications for the results [117]. Although such approaches are typically used for assessing the personal values of individuals in business literature, due to the hidden nature of the values behind attitudes and behavior, outcomes cannot be directly observed from a peer’s perspective [36,118]. Third, the convergent nature of, for instance, Gen Y’s values across the globe [48] allows us to examine them in various societal contexts. We selected Slovenia as an example of a well-developed economy in Central Europe that belongs to the Central European culture cluster and that has tight relations with the German culture cluster, due to business collaboration, as well as traditional good linkages to the Balkan countries [119]. This enabled us to capture representatives of the new generation from a well-developed society, with tight associations with other societies. Although, we need to keep in mind that some of the “old” collectivistic orientations can still have an effect on the shaping of personal values among Slovenian youth and may also explain why universal values are so prominent in our study [88]. Fourth, we presupposed personal values that (future) leaders will need at the workplace of Industry 4.0, based on a literature review, knowledge about personal values and Industry 4.0 and experiences from business practice. Finally, our sample included respondents from Gen Y and Z and is considered homogeneous. Statistical analysis, where we examined for possible
differences between both generations, revealed a significant difference for only one variable, namely, tradition-conformity, among eight dimensions of values and leadership inclinations. The absence of other differences, which may be expected [20], can be attributed to the fact that most respondents from Gen Z were born between 1995 and 2000 and are in the so-called “transitional period”, where their value (as well as their other perceptions) are very similar, due to the small age span and the longevity of personal values [64], as well as the lack of time to evolve enough to be substantially different from previous generations.

5.4. Future Research Directions

This study offers the following future research directions. First, the poor fit between the personal values of prospective future leaders and the requirements of the workplace of Industry 4.0 calls for further research in this area. Second, despite the convergent nature of the younger generation’s values across societies [17,18,83], substantial differences in the personal values across diverse societies [89] suggest that it would be beneficial to examine whether the pattern of the results is valid in other cultural contexts. Third, Gen Y and Z are increasingly becoming a dominant workforce and are pushing the narrative of future work. Thus, studies should be conducted on the personal values of the leaders from new generation already employed in organizations to enhance the cognitions from current research. Fourth, more studies should be carried out to better understand the workplace of Industry 4.0 and to examine the values associated with it, in order to support leaders in the workplace of Industry 4.0. Fifth, our results indicate that, in some instances, current leaders and managers display similar prominent personal values to those of the prospective future leaders from our study [21,58,120], thus raising the question of whether their values can support sustainable Industry 4.0 workings in the future. More studies should therefore also be conducted on the personal values of the current leaders that are employed within organizations already under Industry 4.0 transformation to see if they have changed because of the requirement of the new business environment. Sixth, our findings also highlight some controversy, since universalism values are important among Gen Y and Z, while their impact on leadership inclination for working in Industry 4.0 is negative, revealing a poor fit between the values of future leaders and the Industry 4.0 workplace requirements. However, the high importance of universalism values is an important driver of sustainable development. Therefore, these controversies should be addressed and clarified in future research. Finally, since, typically, values need around 10 years to change between generations, future research should also take into consideration distinguishing between Gen Y and Gen Z.

6. Conclusions

We found that prospective future leaders from Gen Y and Z put self-enhancing values, conservation and openness to change in the forefront, which are general leader traits. The multicultural, multidisciplinary, agile, open and collaborative future workplace of Industry 4.0 requires, above anything, universal, benevolent, and, in general, self-transcendence personal values. This indicates a poor fit between the personal values of prospective future leaders and the required values of the Industry 4.0 workplace. However, the nature of every organization is that it has its own requirements in terms of leadership behavior, due to the different environment in which it operates; our cognitions therefore serve as a general guide to secure proper organizational workings. These cognitions have significant implications in the context of the organizational workings in Industry 4.0. New generations are different because of their upbringing, and this is reflected in their personal values. Especially in the case of Gen Y and Z leadership, organizations will have to utilize programs or methods to develop their future leaders so that they better fit with their goals and aims in Industry 4.0. Indeed, these endeavors may end up being successful as, in general, new generations are also very open, benevolent and universally oriented, which may also be reflected in future leaders.
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