



Perceived Values in relation to the Olympic Games: development and use of the Olympic Value Scale

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ABSTRACT

Research question: This study is concerned with the perception of values in relation to the Olympic Games. As, to date, there is no scale available that captures such value perceptions, the goal of this study is to develop and validate the Olympic Value Scale (OVS).

Research methods: In a series of pre-studies and main studies with Olympic Games experts (total $n = 561$) and residents from various countries (total $n = 3576$), we have developed and calibrated the OVS. Exploratory and confirmatory factor analyses that control for stylistic response behavior were conducted to assess the psychometric properties of the scale.

Results and findings: The OVS contains 12 items that load onto three factors: (1) appreciation of diversity, (2) friendly relations with others, and (3) achievement in competition. An additional enjoyment-related factor lacked discriminant validity and, thus, was not included in the OVS. The scale is valid and reliable in both English (here: USA) and German (here: Germany). All three OVS dimensions relate to individuals' perceptions, attitudes, and intentions.

Implications: The International Olympic Committee and related stakeholders can use the OVS to assess and monitor value perceptions in relation to the Olympic Games. In future research, it would be interesting to find out whether the values influence residents' opinion about hosting Olympic Games in their home country and the promotion of sport in reference to the Olympic Idea.

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Introduction

Under the supreme authority and leadership of the International Olympic Committee (IOC), the Olympic Movement encompasses several organizations (e.g. the National Olympic Committees [NOCs] and sport federations), athletes, and individuals who agree to be guided by the Olympic Charter (IOC, 2017a, p. 15). The Olympic Movement's founder, Pierre de Coubertin (1931), claimed that the Olympic Games were more than a conglomeration of championships that attract athletes from all over the world. Both the Olympic Movement and the Olympic Games are known for their ambition to influence humans beyond the mere act of the sporting competition. According to the Olympic

Charter, they aim to ‘contribute to building a peaceful and better world by educating youth through sport practised in accordance with Olympism and its values’ (IOC, 2017a, p. 15). This rather lofty expression of the Olympic Idea should be translated properly and manifested in the practice of organizing the ultimate Olympic expression: the Olympic Games. The Olympic Games are the biggest sport event in the world, governed by the IOC. Alternating every two years, there is a summer and a winter edition. In summer 2016, more than 11,000 athletes from 206 nations competed in 306 events and 28 different sports (IOC, 2016a).

However, lately, fewer cities are bidding for the hosting of the Olympic Games and many city residents do not feel and think positively about hosting this event in their home city (e.g. Könecke, Schubert, & Preuß, 2016). But why have most recent referendums about the hosting of the Olympic Games in cities that are located in democratic nations revealed a negative attitude in the host population? One reason (besides cost and sustainable city development concerns) may be that some host city residents doubt that the Olympic Games promote positive values and do good to the society. If an Olympic Value Scale (OVS) were available, both researchers and practitioners would be able to assess individuals’ perspective of what the Olympic Games stand for today. Indeed, the host population’s support for hosting the Olympic Games is required according to the IOC’s most recent regulations (IOC, 2014, 2017b; Könecke et al., 2016). Also, one could assess whether a change in the Olympic system (e.g. the recently introduced dialogue process and new procedure of the awarding of the Olympic Games) leads to a positive perception of both the Olympic Values and the Olympic Games. The IOC could thus monitor its actions to make sure that they meet the needs of the society. To conclude, we can state that it is important to understand how the value perceptions of individuals can be positively influenced to enhance both the role of the Olympic Movement and the spectacle provided by the Olympic Games.

In this study, we aim to develop the OVS. Our research goes beyond answering the question of what values should be associated with the Olympic Games or the Olympic Movement (DaCosta, 2006; Parry, 1998) or what values the IOC (1949, 2017a) defines. While there are values mentioned in the Olympic Charter that are supposed to represent the Olympic Movement, we do not know what the values are that individuals associate with the Olympic Games, and what their level of agreement to different value representations is. There is a need for the OVS to take into account individuals’ perspectives, because the Olympic Idea, as defined in the Olympic Charter, rarely translates and manifests in the practice of hosting the Olympic Games (Milton-Smith, 2002). Our proposed OVS allows the assessment of individuals’ perception of values that describe the Olympic Games. The goal of our study is to develop and validate such a scale.

In the next section, we review previous research on values and their measurement, describe the origins of Olympic Values, and provide an overview of existing conceptualizations of Olympic Values. Then, we develop and validate our proposed OVS and examine the relationship between the OVS and managerially and societally relevant concepts. Finally, we discuss the theoretical, methodological, and practical implications of the OVS as well as limitations and directions for future research.

Literature review

Previous research into organizational and human values

Organizational values are beliefs held by organizational actors about a specific end state of existence or a specific mode of conduct of organizations (e.g. Connor & Becker, 1994). Although some authors have argued that only individuals are able to form values (Pruzan, 2001), it is widely accepted that organizations can have values too (Sagie & Koslowsky, 1998). While organizations may have certain values, individuals within an organization can have different values. The match between the two is captured via a variable called shared values or organization-employee value fit (Bado-vick & Beatty, 1987). Scales have been developed for both organizational values and shared values (e.g. Sagie & Koslowsky, 1998). Most importantly, individuals form beliefs (and hence values), either in relation to their employer or to themselves. Next, we briefly review the human values literature.

Human values can be defined as human beliefs about a specific end state of existence or a specific mode of conduct of persons (Rokeach, 1968, 1973). The literature proposes several scales to measure human values. The List of Values (LOV) (Kahle, Beatty, & Homer, 1986), the Rokeach Value Survey (RVS) (Rokeach, 1973), the Values and Life-styles Scale (VALS) (Mitchell, 1983), and the Schwartz Value Survey (SVS; Schwartz, 1992, 2006) are valid, reliable, and commonly used scales. They are based upon individuals' rankings of values on a list or their agreement to value-related statements. Conceptual arguments are based mainly on Rokeach's (1968, 1973) and Maslow's (1954) considerations on human nature, motivation, and personality.

In agreement with the definitions presented above, we define Olympic Values as beliefs of the Olympic Movement and the Olympic Idea as they represent a specific end state of existence or a specific mode of conduct. But why have Olympic scholars not used or adapted the existing scales that capture organizational or human values? One of the reasons may be that the historic origins of some Olympic Values date back to the Ancient Greek times (i.e. a time before these scales had been proposed) and that, particularly since the first hosting of the modern Olympic Games in Athens in 1896, Olympic scholars have repeatedly discussed and refined Olympic Values with reference to the Olympic Charter (and without reference to the general organizational or human values literature). In 1949, Olympic Values were mentioned in the Olympic Charter for the first time (IOC, 1949, p. 5). Since then, they have been a central component of the Olympic Charter. In what follows next, we review the literature on Olympic Values.

Previous research into Olympic Values

There are two perspectives with regard to Olympic Values. One is that the Olympic Movement *should* represent certain values. This is reflected in the view of Pierre de Coubertin (among others) and the IOC (e.g. Olympic Charter). The other is that people may associate certain values with the Olympic Movement. The latter looks at the *value perception* of individuals. Next, we review the literature that has followed either the first or the second approach. We then describe the need for further research on individuals' perspective of values in relation to the Olympic Games.

Olympic Values from the perspective of Olympic Movement scholars

The Olympic Movement claims to represent a ‘philosophy of life’ that entails certain values – the so-called Olympic Values (IOC, 2017a, p. 11). In particular, ‘the Olympic Movement claims itself to be a community of Olympic Values, which is based on the Olympic Idea’ (Liese, 2011, p. 75). Although Olympic Values were explicitly mentioned in the fundamental principles of the Olympic Charter (IOC, 1949, p. 5), neither the Olympic Charter nor the scholarly literature on Olympic Values provides a clear answer to the question of which values represent the Olympic Movement today. In what follows, we briefly review the perspective of Pierre de Coubertin and his successors on Olympic Values.

Baron Pierre de Coubertin, born in 1863, reestablished the Olympic Games and added, at the time, a modern and international perspective. To him, the Olympic Games were not only a sport event in which athletes competed with each other. In addition to allowing for competition, he aimed to educate young people through sport. Inspired by the English education system that made school children practice sports, Pierre de Coubertin intended to use the Olympic Games to spread the idea of education through sport around the world (Coubertin, 1887).

In 1894, Pierre de Coubertin gave a lecture to the Parnassus Literary Society in Athens and said:

This is the order of ideas from which I intend to draw the elements of moral strength that must guide and protect the renaissance of athletics. Healthy democracy and wise and peaceful internationalism will make their way into the new stadium. There they will glorify the honour and selflessness that will enable athletics to carry out its task of moral betterment and social peace, as well as physical development. That is why every four years the restored Olympic Games must provide a happy and fraternal meeting place for the youth of the world, a place where, gradually, the ignorance of each other in which people live will disappear (Coubertin, 1894, lines 336–347).

Furthermore, in his *Olympic Memoirs*, Pierre de Coubertin wrote that Olympism is a ‘school of nobility and of moral purity as well as of endurance and physical energy – but only if ... honesty and sportsman-like unselfishness are as highly developed as the strength of muscles’ (Coubertin, 1931, p. 208). These citations provide evidence that Pierre de Coubertin proposed a set of values that the Olympic Movement should stand for. He inspired both his successors and researchers to discuss the various facets of Olympic Values.

In social science research, Olympic Values have mostly been explored from the perspective of philosophy, sociology, and anthropology. Chatziefstathiou (2005), not limiting her ethnographic content analysis solely to speeches and oeuvres by Pierre de Coubertin but also including the works of other Olympic scholars, concludes that Olympic Values are derived by consensus construction in a global world context. The following values were predominant in her analysis: (1) equality (with regard to women as well as people from different social classes and from colonies), (2) excellence, (3) fair play and chivalry, (4) amateurism vs. professionalism, (5) universalism, (6) internationalism, and (7) multiculturalism. She suggests that (8) environmentalism should be added to this list as it was often mentioned in speeches and writings at the beginning of the twenty-first century. She argues that some of the values have decreased in relevance over time (such as amateurism)

while others have remained constant or increased in relevance (see also Parry, 1988 for a discussion of the stability of Olympic Values over time).

Chatziefstathiou's (2005) extensive work on Olympic Values is an attempt to identify Olympic Values based upon ethnographic research of Olympic scholars' writings and speeches spanning a period of more than 100 years, as well as an effort to evaluate the changing nature of these values against the contemporaneous historical, sociopolitical, and economic contexts. Other authors focus on ethical concerns, that is, conflicts between Olympic Values and certain less salutary human behaviors (e.g. doping in athletes, corruption of officials). Parry (1998), for example, attempts to make principled judgments about ethical matters through the Olympic Values. In his arguments, he refers to Pierre de Coubertin and subsequent IOC presidents as well as German researchers (Grupe, 1997; Lenk, 1964, 1976) that led him to make seven simple statements that capture the essence of what an 'ideal human being ought to be and to aspire to' regarding the Olympic ideal (p. 160). Taking the perspective from anthropological philosophy, he writes:

Olympism promotes the ideals of: [1] individual all round harmonious human development, [2] towards excellence and achievement, [3] through effort in competitive sporting activity, [4] under conditions of mutual respect, fairness, justice and equality, [5] with a view to creating lasting personal human relationships of friendship, [6] international relationships of peace, toleration, and understanding, and [7] cultural alliances with the arts (pp. 160–161; see also Parry, 2016).

Milton-Smith (2002) also takes an ethical perspective. In his writing, which can be classified as a position stance, he uses the Olympic Games as a case to discuss global ethics. He notes that people (or even 'heroes' or 'champions') who represent the Olympic Idea are the ones who have the following human virtues: (1) courage, (2), dedication, (3) perseverance, (4) humility, (5) civic duty, (6) altruism, (7) empathy, (8) loyalty, (9) team commitment, and (10) moral strength. He argues that these human virtues are universal and help explain the relationship between values and ethics. While he provides examples of conflict in these relationships, he also states that the Olympic Games are a 'platform for building a framework of global values to counterbalance the naked economic priorities which have dictated the pattern of globalization to date' (p. 136).

DaCosta (2006) adds that the concept of Olympic Values may even provide a new legitimization for the Olympic Games in general and philosophical directions for Olympism in particular. This brings us to the IOC's perspective and its perception of Olympic Values. In the following, we review the evidence that the IOC provides on what Olympic Values are and how they can be conceptualized.

Olympic Values referenced by the IOC

The Olympic Charter is the IOC's (2017a) governing instrument that has a constitutional nature. It introduces the fundamental principles, which include the values of Olympism. Similar to Pierre de Coubertin, the IOC does not provide a finite and consistent list of values that reflect the Olympic Values. Instead, the IOC presents pieces that together comprise the Olympic Values. An important section in the Olympic Charter regarding Olympic Values is the following:

Olympism is a philosophy of life, exalting and combining in a balanced whole the qualities of body, will and mind. Blending sport with culture and education, Olympism seeks to create a way of life based on the joy of effort, the educational value of good example, social responsibility and respect for universal fundamental ethical principles (IOC, 2017a, p. 11).

The IOC (2017a) outlines further that ‘the goal of Olympism is to place sport at the service of the harmonious development of humankind, with a view to promoting a peaceful society concerned with the preservation of human dignity’ (p. 11). Moreover, the IOC (2017a) states that the Olympic Movement shall be ‘without discrimination of any kind, such as race, colour, sex, sexual orientation, language, religion, political or other opinion, national or social origin, property, birth or other status’ (p. 12). These citations highlight that Olympic Values often refer to human rights, and given their fundamental nature, they might indeed overlap.

To discern how individuals associate certain attributes (some of which may be considered Olympic Values) with the Olympic brand, the IOC commissioned Edgar, Dunn & Company (1999) to conduct a consumer survey with 5500 people from 11 countries (Table 1). The study used face-to-face interviews and was administered initially in 1998; it was then replicated in 1999, 2000, and 2002. In a pre-study, the company pre-selected 39 attributes based upon 20 focus group interviews that were collected in 10 countries. In the main study, participants had to rate the attributes according to their association with the Olympic Games, and their importance for the Olympic Games. The following attributes had the highest association scores: friendship, striving, global (awareness, added by the authors), fair competition, participation, multi-cultural, festive, and peaceful. Table 1 presents an overview of the first study that was commissioned as well as the most recent studies commissioned by the IOC, that is, IPSOS (2002), Honey and Graham (2005, for Sponsorship Intelligence), and Kantar (2014).

The IOC further created dimensions of Olympic Values to reduce complexity and increase the application of Olympic Values in different settings (e.g. communication to youth and athletes). In 1999, the following four value dimensions were proposed: (1) hope, (2) dreams and inspiration, (3) friendship and fair play, and (4) joy in effort (Edgar, Dunn & Company, 1999). In more recent marketing communication, the IOC (2012) rearranged and renamed the dimensions; in 2012, the IOC referred to (1) excellence, (2) friendship, and (3) respect.

Table 1. Overview of the studies commissioned by the IOC.

Year	1999	2002	2005	2014
Attributes with highest ratings	Fair competition, festive, friendship, global, multi-cultural, participation, peaceful, striving	Being the best, dynamic, friendship, eternal, participation, respectful, striving, trustworthy	Being the best, celebration, determination, excellence, dynamic, festive, global, participation, striving	Authentic, diversity, excellence, friendship, global, heritage and tradition, inclusive, inspirational, optimistic, peace, respectful
Survey and sample	Face-to-face interviews in 1998, 11 countries, $n = 5500$	Face-to-face interviews in 2002, 11 countries, $n = 7100$	Face-to-face interviews in 2004, 11 countries, $n = 6500$	Face-to-face interviews in 2014, 16 countries, $n = 12,000$
Company	Edgar, Dunn & Company	IPSOS	Sponsorship Intelligence	Kantar

Limitations of previous attempts to capture values and the need for an OVS

Previous attempts to capture Olympic Values have some important limitations. First, the object of reference differs between the studies. Some authors assess values in relation to the Olympic Movement (e.g. Chatziefstathiou, 2005), while other authors assess values in relation to the Olympic Games (e.g. Milton-Smith, 2002) or the Olympic brand (e.g. Honey & Graham, 2005). There is, however, a distinction between the Olympic Movement as a movement of very different stakeholders pursuing one objective and the consumption of the Olympic Games as a spectacle (to which the brand most likely relates when consumers are surveyed) (MacAloon, 2008, 2016). Thus, general conclusions should be made with caution, as many of the studies are not comparable with each other. In our research, we consistently refer to the *Olympic Games*, as one can assume that people from the general population are not well informed about the Olympic Movement and the Olympic Idea in general (Könecké et al., 2016). Also, we avoid the use of the term ‘Olympic brand’, because individuals may associate the term with marketing activities. The branding (and potential marketing) prime may then make profit-driven interests salient (which is something we did not intend to do in our study).

Second, the study material differs among the various studies. Some authors analyze documents of speeches of Olympic scholars (e.g. Chatziefstathiou, 2005), some authors make position stands from an ethical perspective (e.g. Milton-Smith, 2002), and other authors conduct surveys with consumers (e.g. Honey & Graham, 2005). Perceptions, however, differ between stakeholders (and the materials in which they appear), and those who draw conclusions should bear in mind that the collected data may be biased toward reflecting the organization, different scholars, the Olympic Movement as a whole, the societal expectations, or the consumers. In our research, we survey individuals from the general population and use three representative samples in different countries after having ensured that only relevant value facets of the Olympic Games are identified (with the help of experts). Our approach is standard practice in scale development procedures (Churchill, 1979; for a more recent scale development study, see Stadler Blank, Koenigstorfer, & Baumgartner, 2017).

The third limitation in previous studies is that neither the scientific literature nor the IOC offers a valid and reliable scale to capture Olympic Values. The IOC’s propositions on values mentioned in the Olympic Charter have historic origins and have been derived via top-down practices (i.e. reflecting the IOC’s perspective of what values they want Olympism and the Olympic Games to be associated with). Thus, to date, there is no scale that has been developed following typical scale development procedures. As argued before, the need for a scale can be justified by the fact that the Olympic Idea, as an integral part of the Olympic Games, has not been translated adequately and manifested in the practice of hosting the ultimate Olympic expression: the staging of the Olympic Games. Thus, there is a need to better understand individuals’ perception of values in relation to the Olympic Games. It is important to understand how these perceptions can be positively influenced to enhance both the role of the Olympic Movement and the spectacle provided by the Olympic Games (in particular against the background of recent scandals within important stakeholders of the Olympic Movement, such as the IOC, NOCs, and organizing committees).

Overview of the OVS development procedure

We report four pre-studies and two main studies designed to develop and validate the OVS. In the four pre-studies, we generate an initial pool of items (pre-study 1), reduce the total number of items based on applicability ratings (pre-study 2), and further reduce the items via exploratory factor analysis (EFA) based on one survey in the UK (pre-study 3) and on another survey with participants from various countries (pre-study 4). Next, in main study 1, we calibrate the OVS (see Stadler Blank et al., 2017 for the procedure). In main study 2, we replicate the scale for a German sample.

The two main studies consider several variables for validation purposes. As called for by Milton-Smith (2002), we relate the OVS to individuals' perceptions, attitudes, and intentions. Specifically, we consider managerially and societally relevant concepts, such as individuals' attitude toward the Olympic Games, their involvement with the event, their identification with the athletes in the Olympic Games, perceived credibility of the IOC, individuals' intention to follow and engage in the Olympic Games, and the experience that individuals have with the Olympic Games. Only if the OVS was able to correlate with managerially relevant variables could the use of the scale be recommended to stakeholders.

The OVS we develop draws from the opinions of both experts and people from the general population. Experts are considered in pre-studies 1 and 2 as they have good knowledge about what Olympic Values are and which of them are most important to be included in a scale that measures perceived values in relation to the Olympic Games. As our study focuses on the perception of values from the perspective of people from the general population, samples that consist of individuals from various countries are used in pre-studies 3 and 4 as well as in the two main studies. Next, we describe the scale development procedures.

Pre-studies

Pre-study 1: item development

To generate an initial pool of Olympic Value items, we conducted an initial pre-study (online survey). To reach a large variety of scholars with different nationalities and professional backgrounds, we used several networks (i.e. Olympic Studies Centres, International Olympic Academy [IOA], National Olympic Academies [NOAs], universities, Olympic Games associations, and the International Sport for Development and Peace Association [ISDPA]). We contacted 1500 Olympic scholars via email in 2014. One hundred and ninety Olympic scholars from 46 countries and 5 continents ($M = 49$ years of age, 30% female) completed the survey (8% response rate).

Participants were asked to state any Olympic Values that came to mind (unaided recall). We also asked them to rate how important some pre-selected Olympic Values were in representing the idea of the modern Olympic Games. We referred to 12 value-related concepts that are explicitly mentioned in the fundamental principles of the IOC's (2013) Olympic Charter. The response scales were anchored at 1 = 'unimportant' and 5 = 'very important'. Participants were finally asked about their opinion of the Olympic Games before some sociodemographics were assessed.

In total, participants mentioned 1348 Olympic Values (unaided recall), of which 197 did not overlap. All 12 value-related concepts that were mentioned in the Olympic Charter were among the 197 recalled Olympic Values. The results of the importance rating of the 12 value-related concepts showed that all items scored higher than 3.5 (5-point rating scale, ordered according to importance, the first being the most important): fair play; striving for personal excellence; equality; friendship; mutual understanding; peace; solidarity; sport as a human right; joy of effort; blending sport with culture, education, and environment; harmony; and balance of body, will, and mind. These results indicate that the scholars who took part in pre-study 1 may have largely adopted the fundamental principles that are mentioned in the Olympic Charter, and that they perceive them as relevant to representing the idea of the Olympic Games today.

We also performed a review of existing Olympic Value conceptualizations (see references above) as well as human value inventories that may be applicable to and relevant for the Olympic Games to supplement the survey data (e.g. Kahle, 1983; Rokeach, 1968, 1973). This process yielded an additional 26 potential Olympic Value items.

Next, we asked seven Olympic scholars (from all five continents) to select the values (out of 223) that are applicable to and relevant for the Olympic Games (which are the focus of our study). In agreement with the seven experts and the human value literature (Kahle, 1983; Rokeach, 1968, 1973), we defined perceived values in relation to the Olympic Games as an enduring prescriptive or proscriptive belief of the Olympic Games as they represent a specific end state of existence or a specific mode of conduct. We eliminated values for which at least four of the experts stated that they were not applicable or relevant, or when values had a similar meaning (e.g. ‘accomplishment’ was kept, but ‘sense of accomplishment’ and ‘a sense of accomplishment’ were eliminated). This left us with 158 values. To develop a more parsimonious scale capable of capturing values in relation to the Olympic Games, we conducted a second pre-study (see Stadler Blank et al., 2017, for the logic of the sequential procedure).

Pre-study 2: assessment of item applicability

The main objective of pre-study 2 was to reduce the total number of items to a more manageable number for scale development purposes by assessing the applicability of the various items to determine values in relation to the Olympic Games. In total, 3041 former IOA participants were contacted via email in 2014, and our sample consisted of 364 participants from 97 countries ($M = 43$ years of age, 42% female; 12% response rate).

In the online survey, we assessed the applicability of the different values in relation to the Olympic Games. The survey started with the following instructions:

Please look at the Olympic rings (the symbol of the Olympic Games) that will appear on the next screen and think about the values of the Olympic Games as well as how they are similar or different. Please think of values of Olympic Games in general and refer to what the Olympic Games stand for. Please do not refer to specific Olympic Games, but to the Olympic Games since 2000 in general.

The Olympic Rings were shown for 30 seconds. Then, the participants automatically advanced to the next page with the following text:

On the following screens, you will see a variety of values that might be used to describe the Olympic Games. Please think carefully about how applicable each individual value is in describing the Olympic Games. Do not assume that all values are equally applicable to describing the Olympic Games. Please differentiate between those values that are highly relevant and those that are less relevant to characterizing Olympic Games.

Participants then rated the extent to which each of the 158 items could be used to accurately describe the values in relation to the Olympic Games, measured on a 7-point scale from 1 = 'not at all applicable' to 7 = 'very applicable'. Participants could also list any other items that described the values in relation to the Olympic Games that were not already in the survey.

We calculated mean applicability scores for each of the 158 items. If the mean score was at least 5 (out of 7), we retained the item. We also retained 6 value items listed by participants that did not overlap with existing items and were applicable to and relevant for the Olympic Games as confirmed by the seven-person expert team. This procedure resulted in the retention of 84 items for the next study. These item-reduction steps are standard practice in scale development efforts (an example is provided by Stadler Blank et al., 2017).

Pre-study 3: individuals' perceptions and item reduction based on the results of an EFA (84 items)

The main objectives of pre-study 3 were to assess a sample of people from the general population with respect to their perception of how well the 84 items describe the values that the Olympic Games stand for, to find out about potential difficulties that individuals have in understanding the items, and to reduce the number of items further to obtain a more manageable set of items.

To reach these goals, we conducted an online survey with residents in the UK in 2015. A market research agency helped us collect the data and it paid its panel members for participation in the study. After elimination of 80 participants who had no variance in ratings of values (a first indicator that some individuals do not differentiate between items regarding their meaning), the data from 807 participants (52% female; age: 13% between 18 and 24 years, 35% between 25 and 39 years, 33% between 40 and 54 years, and 20% between 55 and 64 years) were used. Quota sampling was used to represent the UK population with regard to age, gender, and income. Participants had medium to moderately high levels of sport involvement ($M = 4.67$, $SD = 2.04$, assessed on a 7-point rating scale, 1 = 'very low', 7 = 'very high').

In the survey, participants rated the extent to which each of the 84 items could be used to accurately describe the values in relation to the Olympic Games, measured on a 7-point scale from 1 = 'does not describe the values of the Olympic Games at all' to 7 = 'describes the values of the Olympic Games very well'. In an open-ended question, we also asked them to state any additional items and any difficulties they had during the survey when answering the questions.

We first conducted an EFA, using maximum likelihood estimation with Promax rotation, on all 84 items. The analysis revealed a seven-factor structure (based upon eigenvalues > 1). One factor is highly predominant, as it explains 53% of the variance in the ratings of the participants (eigenvalue = 44.58). The second factor has an eigenvalue of 4.99, the third an eigenvalue of 2.38, and the fourth an eigenvalue of 2.27. All other

factors have eigenvalues between 1.13 and 1.01. We then eliminated broadly defined items or ambiguous items with low loadings on a single factor (i.e. target loadings below .4; Kline, 2015) or (low) loadings on multiple factors (e.g. pluralism, idealism – it is likely that participants may have felt that these [Olympic Games-related] value items are the basis for humankind living together and this may have been why they did not appear in a single factor; see IOC, 2014; other examples are a stimulating life, beauty – these [Olympic Games-related] value items may have been too abstract to have clear factor loadings). Twenty-one items that load onto three factors remained after this procedure.

We discussed both the eliminated and the retained items with the expert team to make sure that we were capturing the most substantive dimensions and their potential indicators. All experts supported the three-factor and 21-item solution. To rule out the possibility that the factor structure is unique to UK residents and to test for the generalizability of the items, we wanted to consider a broader sample at this exploratory stage. Thus, for replication and refinement purposes, we conducted another pre-study using the 21 items that remained. It allowed us to reduce the number of items further to obtain a more compact scale.

Pre-study 4: dimensionality assessment and further item reduction (21 items)

The main objective of pre-study 4 was to explore the dimensionality of the items that potentially describe the Olympic Games from the perspective of a broader sample, using the reduced set of 21 items identified in the third pre-study. Based on the feedback from participants of the pre-studies, we explained some items that might be too abstract to capture in only one word but are still descriptive of the values in relation to the Olympic Games (i.e. all items scored higher than 5 in the third pre-study and formed one dimension): anti-discrimination, diversity, equality, solidarity, and tolerance. Thus, we formulated brief descriptors of the values: anti-discrimination (not discriminating against people because of race, gender, religion, or sexual orientation), diversity (respecting people of different backgrounds), equality (creating equal opportunity for all), solidarity (creating a society that binds people together), and tolerance (tolerating people regardless of their backgrounds). Since four items per factor are considered to be the best trade-off between fulfilling validity and reliability requirements and compactness and applicability of scales (Kline, 2015), another goal of the study was to identify items with the highest loadings and to contrast these findings with the findings from pre-study 3.

To this end, we conducted another online survey with individuals who were recruited in international online sports forums. After elimination of 26 participants who had no variance in ratings of values in relation to the Olympic Games and 19 participants with missing data, the data from 487 participants (66% female; age: 22% between 18 and 24 years, 45% between 25 and 39 years, 22% between 40 and 54 years, and 11% between 55 and 64 years) from 16 countries were used for further analysis. The study was conducted in 2015. Participants had moderately high levels of sport involvement ($M = 5.29$, $SD = 1.63$).

In the survey, participants rated the extent to which each of the 21 items could be used to accurately describe the values in relation to the Olympic Games (see pre-study 3). We again conducted an EFA (maximum likelihood estimation with Promax rotation) with all items. As in pre-study 3, a three-factor structure emerged with eigenvalues of 7.86, 2.91,

and 1.33 for the first three factors. The three factors explained 37%, 14%, and 6% of the variance, respectively. The eigenvalue of a potential fourth factor was exactly at 1.00. In what follows, we will first refer to the three-factor solution and then discuss the meaning of a potential fourth factor.

We eliminated, in a stepwise fashion, the items with the lowest target loadings on each of the factors. Thus, we reduced the set of items further from 21 to 12. The loadings of each of the 12 items onto the three factors can be seen in Table 2. All loadings are higher than .5 and there are no cross-loadings higher than .3 (Kline, 2015). The factor reliabilities and target loadings can be seen in Table 3 and the correlations between factors are shown in Table 4. Common convergent and discriminant validity and reliability criteria are fulfilled. (Main study 1 presents details about the fulfillment of these criteria; it used a confirmatory factor analysis [CFA] and a representative sample.)

Based on the collective meaning of items within each of the factors, we labeled the three dimensions ‘appreciation of diversity’, ‘friendly relations with others’, and ‘achievement in competition’. The correlations between the factors indicate that the first two factors are more highly related to each other compared with the third factor (Table 4).

During item reduction, we eliminated some enjoyment-related items (delight, joy, excitement, entertainment) that might potentially form a fourth factor. The findings from previous consumer research initiated by the IOC (Edgar, Dunn & Company, 1999) suggest that four factors can also be deemed appropriate (even though enjoyment does not appear as a separate dimension in their studies). Based on the results of our pre-studies, enjoyment-related items may form a distinct factor. The interrelationship between enjoyment and other dimensions makes sense from a theoretical perspective, as enjoyment may derive from achievement in competition (e.g. when one athlete representing one’s nation wins a gold medal, which should be enjoyable), from the spirit of togetherness (e.g. when athletes form friendships with other athletes), and from the appreciation of diversity (e.g. when individuals act in accordance with the inclusive aspect of the Olympic Games [such as showing support for refugees participating in the Olympic Games without representing a particular nation]). Thus, the cross-loadings on any of the three factors (and, thus, lack of

Table 2. Factor loadings of the EFA (pre-study 4).

Factors	1	2	3
Corresponding items			
1. Appreciation of diversity			
Anti-discrimination	.89	–.07	–.01
Tolerance	.83	–.01	.00
Diversity	.78	.09	.03
Equality	.59	.22	–.05
2. Friendly relations with others			
Friendship	–.08	.86	.00
Warm relations with others	.06	.75	.00
Brotherhood	.06	.66	.00
Understanding	.19	.60	.04
3. Achievement in competition			
Achievement	.09	–.13	.74
Competition	.00	–.10	.70
Achieving one’s personal best	–.01	.08	.67
Effort	–.12	.24	.51

Notes: Loadings > .5 are shown in bold.

Table 3. OVS factor loadings and factor reliabilities (*Italics*) across studies.

Factors Corresponding items	Pre-study 4 (EFA)	Study 1 (CFA)	Study 2 (CFA)
1. Appreciation of diversity	<i>.86</i>	<i>.91</i>	<i>.94</i>
Anti-discrimination	<i>.89</i>	<i>.83</i>	<i>.86</i>
Tolerance	<i>.83</i>	<i>.84</i>	<i>.93</i>
Diversity	<i>.78</i>	<i>.84</i>	<i>.90</i>
Equality	<i>.59</i>	<i>.84</i>	<i>.86</i>
2. Friendly relations with others	<i>.81</i>	<i>.86</i>	<i>.88</i>
Friendship	<i>.86</i>	<i>.80</i>	<i>.87</i>
Warm relations with others	<i>.75</i>	<i>.78</i>	<i>.81</i>
Brotherhood	<i>.66</i>	<i>.79</i>	<i>.78</i>
Understanding	<i>.60</i>	<i>.74</i>	<i>.76</i>
3. Achievement in competition	<i>.75</i>	<i>.85</i>	<i>.88</i>
Achievement	<i>.74</i>	<i>.83</i>	<i>.83</i>
Competition	<i>.70</i>	<i>.74</i>	<i>.78</i>
Achieving one's personal best	<i>.67</i>	<i>.76</i>	<i>.81</i>
Effort	<i>.51</i>	<i>.74</i>	<i>.79</i>

Table 4. Factor correlations (pre-study 4).

Factors	1	2	3
1. Appreciation of diversity	<i>.78</i>		
2. Friendly relations with others	<i>.66</i>	<i>.72</i>	
3. Achievement in competition	<i>.02</i>	<i>.20</i>	<i>.66</i>

Notes: Square root of the average variance extracted is shown in the diagonal (*Italics*).

convergence and discriminance) make sense from a substantive point of view. The four enjoyment items are as follows: delight, entertainment, excitement, and joy.

When we consider the four-factor structure, the three factors described above remain and the four enjoyment-related items load onto a fourth factor. However, the target loadings of the four items are relatively small: between .29 and .53 (with only two loadings higher than .5). Furthermore, there are some relevant cross-loadings on other factors (.32 is the highest cross-loading). There is a lack of both convergent and discriminant validity for the fourth factor (see items above). Thus, we decided to use the three dimensions described before.

Pre-study conclusions

Based on the results of the four pre-studies, 12 potential OVS items were retained for the scale calibration study. The three factors appreciation of diversity, friendly relations with others, and achievement in competition potentially provide the factorial structure for the OVS items. Next, we describe the calibration study that used a representative sample from the USA.

Study 1: scale calibration

Method

The objective of main study 1 was to calibrate the OVS. We conducted an online survey with residents in the USA in 2015. A market research agency helped us collect the data and

paid its panel members for participation in the study. Quotas were taken from the statistical yearbook of the USA in relation to gender, age, and gross income to represent the general population of the USA (Table 5). After elimination of 120 participants who had no variance in their ratings of values in relation to the Olympic Games, our sample consisted of 1133 individuals.

Education levels were as follows: 1% of the sample did not finish high school, 19% had a high school degree, 36% had some college degree, 31% had a bachelor's degree, and 14% had a master's degree or a PhD as their highest level of education. Participants had medium to moderately high levels of sport involvement ($M = 4.78$, $SD = 2.08$). Most of them had followed the most recent Olympic Games (91%, most via the television). When asked about whether they support hosting the 2024 Olympic Games in a host city in their country (here [at the time]: Boston; yes, no, I don't care), 554 participants answered yes and 86 of the participants answered no (Table 5).

In the survey, participants rated the extent to which each of the 12 OVS items could be used to accurately describe the values in relation to the Olympic Games, measured on a 7-point scale from 1 = 'does not describe the Olympic Games at all' to 7 = 'describes the Olympic Games very well' (plus four enjoyment-related items and six items to control for stylistic response behavior, which can result from biases such as acquiescence, difficulties in discriminating between Olympic Value items, or the tendency of individuals to give generally high [or low ratings]). We selected six control items that account for stylistic response behavior: cosmopolitan, dominance, limitlessness, power, reliability, and sacrifice (in pre-study 3, they had low loadings on any factor and low inter-item correlations). The items are not part of the proposed OVS but can be employed to control for scale usage differences that are independent from the items that substantively assess the values in relation to the Olympic Games. They can be considered as conceptually unrelated to the dimensions of values in relation to the Olympic Games of interest, as neither the

Table 5. Study 1 (USA) and Study 2 (Germany) sample description.

Variables	Study 1 (USA)	Study 2 (Germany)
Number of participants	1133	1149
Gender (female)	55%	52%
Age (18–24 years)	18%	12%
(25–39 years)	36%	32%
(40–54 years)	35%	35%
(55–64 years)	16%	21%
Gross household income per year (lowest)	18% < \$25,000	30% < €25,000
(Low–medium)	27% \$25–49,999	36% €25–49,999
(Medium–high)	23% \$50–74,999	20% €50–74,999
(High)	31% ≥ \$75,000	13% ≥ €75,000
Sport involvement, M (SD , scale 1–7)	4.78 (± 2.08)	4.95 (± 1.83)
In favor of/against the hosting of the 2024 Olympic Games in a host city in their country (rest of the sample is indifferent)	554/86 49%/8%	567/178 49%/16%
Participants who followed the most recent Olympic Games (via some activity, see below)	91%	88%
Participants who watched the most recent Olympic Games on television	86%	81%
Participants who listened to the most recent Olympic Games on the radio	14%	29%
Participants who followed the most recent Olympic Games on the Internet	32%	24%
Participants who read about the most recent Olympic Games in print media	44%	39%
Participants who followed the most recent Olympic Games on public screens	18%	7%

previously mentioned authors nor the IOC-commissioned agencies assessed them in any of their studies (see above). The use of control items on the individual level (in our study, we subtracted the mean of the six control items from the individual item ratings) is described as one of the best methods to account for stylistic response behavior (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). We also included variables to assess the managerial relevance of the OVS, which are the focus of main study 2. The reliabilities of the OVS factors (Table 3) and all other scales were adequate (Nunnally, 1978).

Results and discussion on scale calibration

We conducted a CFA on the 12 items. The fit of the three-factor model was good (Hu & Bentler, 1999): $\chi^2(51) = 356.66$, standardized RMR = .037, RMSEA = .073, CFI = .96, and TLI = .95. All the standardized target loadings were above .73. The factor correlations were between .55 and .74 (Table 6), and the factor reliabilities were between .85 and .91 (Table 3). The convergent validity criterion (average variance extracted > .5) was met and Fornell and Larcker’s (1981) criterion for discriminant validity was also met, as the correlations were lower than the respective square roots of the average variance extracted (Table 6).

To assess the model fit when we include another factor (enjoyment), we ran a CFA on the 12 items plus 4 enjoyment-related items. The fit for the 16-item, 4-factor model was not acceptable: $\chi^2(98) = 855.40$, standardized RMR = .045, RMSEA = .083, CFI = .93, and TLI = .92. The enjoyment factor had high correlations with other factors (.67, .81, and .80, respectively) and lacked discriminant validity. This finding supports the results from pre-study 4 and, thus, we did not follow up on the four-factor model or any further model comparisons in our studies.

The results of the CFA thus support the three-factor structure with the following dimensions: appreciation of diversity, friendly relations with others, and achievement in competition. The model fit is good and 12 items describe the three factors with satisfactory validity and reliability. The theoretical and methodological implications of the study will be discussed in more detail in the General Discussion.

Since values in relation to the Olympic Games are supposed to be a universal concept, the OVS should be applicable across countries. Thus, in the next study, we aimed to calibrate the scale for a sample of individuals from Germany – a European country which differs from the USA with regard to several aspects, ranging from Olympic Value-based education in schools and sport clubs (Naul, Krüger, Geßmann, & Wick, 2017; Psimopoulos, Binder, Vermillion, & Naul, 2017) to human value perception (e.g. ‘sense of accomplishment’ and ‘warm relationships with others’ taken from LOV are more important in the United States than in Germany; Grunert & Scherlorn, 1990). As German is the language spoken not only in Germany but also in other countries (Austria, Switzerland),

Table 6. OVS factor correlations (and standard errors) of the two studies.

Factors	Study 1 (USA)			Study 2 (Germany)		
	1	2	3	1	2	3
1. Appreciation of diversity	.77			.89		
2. Friendly relations with others	.74 (.018)	.78		.80 (.014)	.81	
3. Achievement in competition	.55 (.025)	.55 (.026)	.84	.61 (.022)	.50 (.026)	.80

Notes: Square root of the average variance extracted is shown in the diagonal (Italics).

researchers from these countries may be interested in using a valid and reliable scale that is available in German. Aside from our aim to develop a scale that is available in the German language, Germany provides an interesting context, as its population decided against hosting both the 2022 Winter Olympic Games (referendum in Munich in 2013) and the 2024 Summer Olympic Games (referendum in Hamburg in 2015).

The study also aims to present examples of the usefulness of the scale to explain managerially and societally relevant concepts: individuals' attitude toward the Olympic Games, their involvement with the event, their identification with the athletes in the Olympic Games, perceived credibility of the IOC, individuals' intention to follow and engage in the Olympic Games, and the experience that individuals have with the Olympic Games.

Study 2: scale replication in Germany and managerial relevance

Method

The objectives of main study 2 were to replicate the OVS in Germany and to provide evidence for the managerial relevance of the OVS. To this end, we conducted an online survey with German residents in 2015. Quotas to represent the population in Germany were used (Table 5). After elimination of 66 participants who had no variance in their ratings of values in relation to the Olympic Games, our sample consisted of 1149 individuals. Education levels were as follows: 5% of the sample left school after 9th grade, 20% left after 10th grade, 24% had some vocational education degree, 24% had a high school degree, 19% had a bachelor's, diploma, or magister degree, and 7% had a master's degree or a PhD as their highest level of education.

Back-and-forth translations with two native bilingual speakers were made to ensure that the translations captured the meaning of the original English items. In the survey, participants rated the extent to which each of the 12 OVS plus control items could be used to accurately describe the values in relation to the Olympic Games (see main study 1; Figure 1). In addition, managerial and societally relevant variables were assessed (see Table 7 for scale

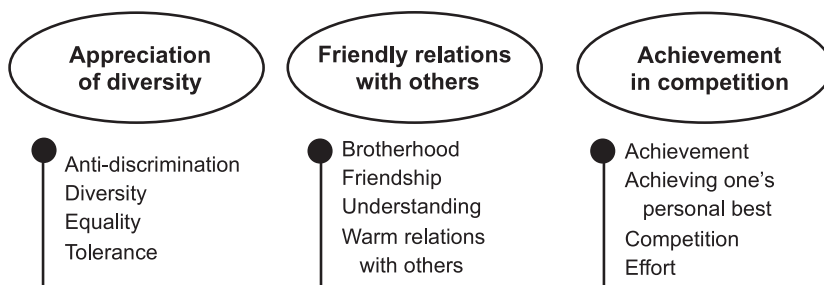


Figure 1. The OVS.

Notes: Translations into German: Appreciation of diversity was measured as follows: Anti-Diskriminierung (anti-discrimination), Diversität (diversity), Gleichberechtigung (equality), and Toleranz (tolerance). Friendly relations with others were measured as follows: Verbrüderung mit anderen (brotherhood), Freundschaft (friendship), Verständnis (understanding), and Herzlicher Umgang mit anderen (warm relations with others). Achievement in competition was measured as follows: Leistung (achievement), Seine persönliche Bestleistung erbringen (achieving one's personal best), Wettbewerb (competition), and Anstrengung (effort).

Table 7. Correlations of the values in relation to the Olympic Games with managerially and societally relevant variables.

	Attitude toward Olympic Games	Identification with Olympic Games athletes	Involvement with Olympic Games	Perceived credibility of the IOC	Behavioral intentions to follow Olympic Games	Brand experience: Think	Brand experience: Feel	Brand experience: Sense	Brand experience: Act
Study 1 (USA)	<i>.95</i>	<i>.91</i>	<i>.96</i>	<i>.97</i>	<i>.88</i>	<i>.95</i>	<i>.91</i>	<i>.92</i>	<i>.95</i>
Appreciation of diversity	.49***	.30***	.29***	.45***	.27***	.30***	.30***	.30***	.27***
Friendly relations with others	.52***	.46***	.45***	.47***	.42***	.48***	.49***	.47***	.40***
Achievement in competition	.43***	.20***	.22***	.18***	.12***	.15***	.20***	.17***	.11***
Study 2 (Germany)	<i>.94</i>	<i>.92</i>	<i>.97</i>	<i>.96</i>	<i>.88</i>	<i>.92</i>	<i>.93</i>	<i>.95</i>	<i>.96</i>
Appreciation of diversity	.62***	.34***	.36***	.37***	.34***	.31***	.35***	.32***	.24***
Friendly relations with others	.66***	.49***	.50***	.48***	.48***	.47***	.51***	.49***	.37***
Achievement in competition	.38***	.14***	.14***	.10**	.11**	.08*	.12**	.07*	.01

Notes: *** $p < .001$, ** $p < .01$, * $p < .05$. Scale reliabilities (Cronbach's α) are shown in Italics.

reliabilities). The variables were assessed to identify relations between the perceived values and variables that should be of interest to the IOC and related stakeholders. The variables were included in the surveys conducted in the USA and Germany.

Specifically, attitude toward the Olympic Games was measured using Simmons and Becker-Olsen's (2006) three semantic differentials (e.g. negative vs. positive). Involvement with the Olympic Games was assessed via three semantic differentials taken from Zaichowsky (1985): unimportant vs. important, of no concern vs. of concern, irrelevant vs. relevant. Both semantic differentials were assessed on a 7-point rating scale. We assessed the credibility of the IOC using Becker-Olsen, Cudmore, and Hill's (2006) four items (e.g. 'The IOC is a sport institution I believe in'). We also assessed participants' identification with the national Olympic Games athletes using Wann and Branscombe's (1993) 7-item scale (one sample item is: 'How strongly do you see yourself as a fan of your nation's favorite Olympic athletes?'). We also assessed behavioral intentions ('How likely will you attend the Olympic Games in the future?') using five items reflecting intentions with respect to media consumption, information search, interactions in social media, merchandise purchase behavior, and attendance; Funk, 2002). In addition, we assessed the experience with respect to the Olympic Games. The brand experience scale has four dimensions, namely sensory experience ('The Olympic Games strongly appeal to my senses', 'My senses are stimulated by the Olympic Games', and 'I experience the Olympic Games with all my senses'), affective experience ('The Olympic Games are very emotional', 'I have strong emotions for the Olympic Games', and 'The Olympic Games induce strong feelings'), intellectual experience ('I think a lot about the Olympic Games', 'The Olympic Games make me want to learn more about them', and 'The Olympic Games make me think'), and behavioral experience ('The Olympic Games make me want to move more', 'I become more active when I follow the Olympic Games', and 'The Olympic Games encourage me to become more active'). The items were taken from Brakus, Schmitt, and Zarantonello (2009) and adapted to the context of the study. All items were assessed on a 7-point rating scale (anchored at 1 = 'do not agree at all' and 7 = 'fully agree').

Results and discussion on the replication and validity of the OVS

We conducted a CFA on the 12 items. The fit for the 12-item and three-factor model was good: $\chi^2(51) = 144.82$, standardized RMR = .022, RMSEA = .040, CFI = .99, and TLI = .99. All the standardized target loadings were above .76. The factor correlations were between .50 and .80 (Table 6). All the factor reliabilities were between .88 and .92 (Table 3). Common standard convergent and discriminant validity criteria were met. Thus, the German version of the OVS performs well regarding model fit as well as commonly accepted validity and reliability criteria.

We correlated the latent factor scores of the three Olympic Value dimensions with the factor scores of several managerially relevant constructs. The results are shown in Table 7 (which also shows correlations from main study 1, for comparability reasons). The three OVS factors correlate positively with all variables except one variable: the act dimension of the experience that individuals make with respect to the Olympic Games did not correlate with achievement in competition for the German sample. We would like to note that, for both the sample in Germany and the one in the USA (main study 1), achievement in

competition showed weaker correlations with the variables under consideration than the factors appreciation of diversity and friendly relations with others. This indicates that achievement in competition may have less positive consequences than the other OVS dimensions. We will discuss this finding in the General Discussion in more detail.

General discussion

Given the lack of a scale that captures values in relation to the Olympic Games from the perspective of people from the general population, we developed the OVS. The scale has three factors – appreciation of diversity, friendly relations with others, and achievement in competition – that are operationalized via 12 items (Figure 1). An additional enjoyment-related factor lacked discriminant validity and, thus, was not included in the OVS. The OVS could be validated in different countries (particularly USA and Germany) and is useful in predicting managerially and societally relevant phenomena.

Theoretical implications

Previous research in philosophy, sociology, and anthropology has derived a large number of Olympic Value dimensions, with a lack of consensus on the dimensionality and how the dimensions can be captured via a scale: for example, Chatziefstathiou (2005) proposed eight, Milton-Smith (2002) ten, and Parry (1998) seven dimensions; there is no scale available for the assessment of the different dimensions. None of these authors considered the perspectives of people from the general population on values that describe the Olympic Games. This target group is important, however, as values are directed at these individuals and their behaviors. The values are supposed to ‘do good’ in the society (IOC, 2014). Also, none of the authors followed commonly accepted scale development procedures (e.g. Churchill, 1979; Stadler Blank et al., 2017). Considering representative samples in the USA and Germany (as well as the UK, for a pre-study), we found that the three-dimensional OVS is a valid, reliable, and compact scale. In what follows, we briefly discuss each of the three dimensions of the OVS before we make a general note on the attempt to develop a scale that captures values in relation to the Olympic Games.

The OVS dimension appreciation of diversity has some overlap with existing Olympic Value conceptualizations. For example, equality and toleration, two dimensions identified by Parry (1998), have similar meanings to appreciation of diversity, a factor identified in our study (Figure 1). Two items that were mentioned in the studies commissioned by the IOC appear in our scale (diversity and equality; Figure 1, Table 1). In main studies 1 and 2, we found that appreciation of diversity correlates positively with individuals’ perceptions, attitudes, and intentions. Hence, the promotion of appreciation of diversity via the Olympic Games (or other activities by the Olympic Movement) may offer the IOC, the NOCs, and organizing committees a pathway to enhance attitudes toward the Olympic Movement and the Olympic Games as well as increase individuals’ support for bids by their home cities (or other cities in their home country). For example, German residents who decided against bids in two recent referendums may become more supportive of bids when they associate values of anti-discrimination, diversity, equality, and tolerance with the Olympic Games. The latter values are also important for a country’s ambition to

facilitate inclusion of people from other cultural backgrounds in the society (e.g. African or Western Asian refugees). Later, we will discuss potential future research in these areas.

The OVS dimension friendly relations with others shares meaning with existing Olympic Value conceptualizations, particularly with Parry's (1998, 2016) conceptualization and the studies commissioned by the IOC (Table 1). We found that this OVS dimension correlates positively with individuals' perceptions, attitudes, and intentions (Table 7). Thus, stakeholders may influence residents toward a positive perception of the Olympic Games and their hosting when individuals believe that the hosting increases brotherhood, friendship, understanding, and warm relations with others. One can also assume that the value perception has most positive effects when individuals believe not only that the Olympic Games represent these values but also that the stakeholders behind the Olympic Movement (IOC, NOCs, and organizing committees) act according to these values. The concept of shared values (Sagie & Koslowsky, 1998) may thus not only be applicable to individual-organization relationships but also to event-organization relationships. Furthermore, in the light of recent scandals (such as bribery in the context of the hosting of the 2016 Olympic Games in Rio de Janeiro), stakeholders should reconsider their ethical standards (e.g. brotherhood should not be associated with tendencies toward bribery).

The OVS dimension achievement in competition – including achievement, competition, achieving one's personal best, and effort – has some overlap with the meaning of what Parry (1998, p. 160) calls 'excellence and achievement through effort in competitive sporting activity' (i.e. two dimensions according to Parry). Excellence is also mentioned as an Olympic Value factor in Chatziefstathiou's (2005) work. In our study, achievement in competition has lower correlations with the managerially and societally relevant variables than the other two OVS dimensions. Thus, stakeholders may put lower emphasis on achievement, competition, achieving one's personal best, and effort when targeting and communicating with individuals compared to the previous two OVS dimensions. There may be two different explanations for why the correlations are lower. First, Rokeach (1968, 1973), in his early studies on human values, proposed differences between so-called terminal and instrumental values, and this classification might be used to categorize the three OVS dimensions obtained in our study. While both appreciation of diversity and friendly relations with others represent desired end-states of existence (or terminal values; 'equality' and 'true friendship' are two of Rokeach's 18 terminal values), achievement in competition can be considered as a preferable mode of human behavior (or an instrumental value; 'ambitious' and 'capable' are two of Rokeach's 18 instrumental values). This may explain the higher correlations of the first two OVS dimensions with the managerially and societally relevant variables considered in our study than for achievement in competition.

Second, the OVS factors appreciation of diversity and friendly relations with others are directed at serving others (vs. selves). Here, tendencies toward identity protection and protection of resources should be of little relevance (Johns, 1999). The OVS factor achievement in competition, however, relates to self-serving tendencies (vs. serving others), as winning against others in sport is a means both to protect and to express identity. Johns (1999) provides conceptual arguments for the latter claim. These tendencies may also help explain why achievement in competition has lower correlations with the managerially and societally relevant variables than the other two OVS dimensions found in our studies.

To conclude, we can state that the meaning of the dimensions of the OVS has some commonality with the meaning of the IOC-proposed dimensions excellence, friendship, and respect (IOC, 2012) and with conceptualizations from previous research. The OVS is useful as it relates to managerially and societally relevant phenomena. We correlated the OVS with managerially relevant variables and mostly found significant relationships.

Methodological implications of the OVS

Despite the validity and reliability as well as the usefulness of the scale in predicting outcome variables, we note that any scale that captures values in relation to the Olympic Games, including our scale, will never be able to provide a full picture of values. Why is this the case? First, these values ontologically relate to a ‘philosophy of life’ (IOC, 2017a, p. 11) and this philosophy can never be fully quantified via a scale. Second, as part of item-reduction efforts and in an effort to increase psychometric scale properties, items that capture facets different from those addressed in the three OVS dimensions (see main studies 1 and 2) were disregarded (e.g. environmentalism, altruism, and multiculturalism: these factors were identified by Chatziefstathiou [2005]; Milton-Smith [2002]; and Parry [1998]). Thus, the OVS may neglect some important facets that some individuals may associate with the hosting of the Olympic Games. We will discuss the disadvantages of the scale development process in the Limitations and Outlook section. Lastly, perceptions always depend on context and are subject to change. Thus, the OVS may not be replicable in all countries and at all times. We will discuss this limitation later.

Despite these concerns, we believe this study makes a methodological contribution to the sport management literature by applying scale development procedures that account for stylistic response behavior. This has allowed us to account for common method bias in participants’ ratings. According to Podsakoff et al. (2003), measurement of the bias at the individual item level is one of the preferred methods that should be applied more when there is a tendency toward stylistic responding. Schwartz (2006) proposes a similar procedure for the application of his scale (i.e. the SVS). Thus, future research can use the scale, potentially reducing biases introduced by stylistic response behavior. In what follows, we describe the implications of the OVS for practitioners.

Managerial implications of the OVS

First, the OVS can be used as a management tool to monitor changes in values over time and to assess the impact of the OVS on managerially and societally relevant concepts. These functions are particularly important, given the increasing skepticism toward hosting the Olympic Games in some countries (e.g. Könecke et al., 2016), perceptions of corruption within sport organizations (e.g. De Waegeneer, Van de Sompele, & Willem, 2016), and the aim to regain the credibility of the Olympic Values (MacAloon, 2016). Today, some politicians attach the continuation of their bid to host Olympic Games to a positive outcome of a public referendum. Prior to, or in addition to, such referendums, surveys that use the OVS can inform potential bid NOCs and politicians about the population’s perspective of values in relation to Olympic Games. Even though factors such as high costs, negative legacy perception, or security concerns may have been the

main reason for past negative outcomes from referendums (e.g. Munich in 2013, St. Moritz in 2013, Vienna in 2013, Krakow in 2014, Hamburg in 2015, Graubünden in 2017, and Innsbruck in 2017), the perception of values might be another variable that makes people support (or reject) the hosting of the Olympic Games in their home country.

Second, the OVS can also serve as a brand management tool that helps organizations change their organizational culture. The use of quantitative brand equity models in marketing (Keller, 1993), which may include value perceptions for the case of the Olympic Movement or the Olympic Games (and relate to both monitoring and outcome prediction), is one example of why there is a need to quantify value perceptions. The function of managing and monitoring is important to the IOC and its NOCs, because the Agenda 2020 requires changes in both the management and the structure of the IOC and the Olympic Games. The change from a seller market (i.e. the IOC awards the Olympic Games to a city) to a buyer market (i.e. cities indicate interest and the IOC then allows tailored Olympic Games to be hosted that fit the particular city) can be accompanied by a strategic change to a value-driven organizational culture in the IOC and a value-driven hosting of the Olympic Games. The OVS may be used to build up value-driven organizations within the Olympic Movement. These organizations can then influence individuals' perceptions of the Olympic Games and stakeholders in the Olympic Movement. As our results showed, the values of appreciation of diversity and friendly relations with others have the most positive effects on managerially and societally relevant variables. Thus, one can assume that shared value perceptions (assuming that IOC representatives live and act according to values transported by the organization and the event) may help the IOC regain trust in the general population. Similar assumptions can be made for other Olympic institutions.

Third, besides the use of the OVS for developing codes of ethics and leadership principles, the OVS dimensions may be used for educational purposes. The education of athletes of any age can build upon the OVS, with the goal of influencing the personality development of individuals beyond the mere act of performing (and succeeding in) sporting activities (Binder, 2008, 2012; Coubertin, 1887; Naul, 2010; Naul, Binder, Rychtecky, & Culpan, 2017). Educators should particularly consider educational tools that increase appreciation of diversity – a facet that is not currently promoted as a priority (the IOC [2016b] mostly refers to respect and human rights instead) but that it addressed in the Agenda 2020. Also, friendly relations with others have positive consequences for the perception of the Olympic Games and related stakeholders. Educators may hence develop pedagogical and didactical tools that promote the concepts of anti-discrimination, diversity, equality, and tolerance, as well as brotherhood, friendship, understanding, and warm relations with others, via physical activity and in relation to the Olympic Games.

Lastly, the OVS may be used to detect cultural differences and then develop target-group specific management strategies and implementation activities. Even though our studies found that the scale is replicable for different cultural contexts, the ratings of the three dimensions may be different between individuals from different cultures, and the relationship with managerially and societally relevant variables may be stronger or weaker in certain cultural contexts. Stakeholders can make use of such knowledge to run target group-specific programs (e.g. the promotion of other-centered vs. self-centered

values may be more important in Asian cultures than in Western cultures) to effectively communicate the Olympic Idea to people from the general population.

Limitations and outlook

Our research has some limitations. First, we aimed at developing a valid, reliable, and compact scale that captures the most important dimensions of values in relation to the Olympic Games. In a multi-step process, we eliminated items to arrive at a reduced set of 12 items. Some aspects of the procedure may be subject to criticism, such as the exclusion from the scale of some narrowly defined concepts (e.g. enjoyment, for lack of discriminant validity) and some broadly defined concepts (e.g. peace and humanity, for not forming a single factor). However, any attempt to develop a compact and usable scale can be criticized for the absence of some substantially relevant value items. Ontologically, one may also argue that it is impossible to quantify values.

Second, in our studies, we referred to values as they are perceived today in relation to the Olympic Games since 2000. However, we acknowledge that they may be context-specific and subject to change over time (Chatziefsthathiou, 2005). Thus, repeated measurements on how values change over time, using the OVS, would be extremely useful to provide insights into the variability over time. Also, it would be interesting to find out whether, and how, the actions of IOCs or others influence the value perception, depending on the contextual factors of the hosting of Olympic Games (e.g. private vs. public funding for the hosting; differences in the cultural backgrounds of the hosting venues).

Third, most individuals who participated in our studies were from Western countries. Thus, the scale may inherently reflect values that drive individuals in Western cultures more than non-Western cultures. Items that are related to individualism, for example, could have been more relevant compared to an Asian sample, which should score lower on individualism and higher on collectivism and cooperation (Hofstede, 2001). While pre-studies 1, 2, and 4 include a set of persons from different nationalities across the five continents, pre-study 3 and the two main studies are limited to Western country participants (UK, USA, Germany). Future research may find out whether the OVS is valid and reliable for representative samples from other countries.

Lastly, we related the OVS factors to managerially and societally relevant variables that relate to perception, attitudes, and intentions, but did not assess individuals' actual behaviors. It would be particularly interesting to assess the effect of OVS factors on physical activity patterns. Based on the findings on the relationship between achievement in competition (vs. the two other OVS dimensions) and the act dimension of the brand experience, one may assume a weaker impact on behavioral outcome variables for achievement in competition (vs. appreciation of diversity and friendly relations with others). Future research may look at these relationships and their moderators.

Conclusions

We propose the OVS, a valid, reliable, and compact scale that can be used in future studies. Even though we acknowledge that any value will never be able to provide a full picture of values in relation to the Olympic Idea and the Olympic Movement, we have presented some examples of using the OVS – that is, a scale that was derived based on individuals'

perceptions of the Olympic Games – in areas that are relevant for both sport managers and society at large. The value of appreciation of diversity is one dimension that should be promoted by the IOC and the organizing committees of the Olympic Games. The question of how this value, as well as the values of friendly relations with others and achievement in competition, translate into attitudes and behaviors is highly relevant to today's society. We hope to encourage researchers and practitioners to use the scale and to identify means to promote pro-societal behaviors via value-driven organizational activities.

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References

- Badovick, G. J., & Beatty, S. E. (1987). Shared organizational values: Measurement and impact upon strategic marketing implementation. *Journal of the Academy of Marketing Science*, 15(1), 19–26.
- Becker-Olsen, K. L., Cudmore, B. A., & Hill, R. P. (2006). The impact of perceived corporate social responsibility on consumer behavior. *Journal of Business Research*, 59, 46–53.
- Binder, D. (2008). *Teaching values: An Olympic education toolkit*. Lausanne: IOC.
- Binder, D. (2012). Olympic values education: Evolution of a pedagogy. *Educational Review*, 64, 275–302.
- Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand experience: What is it? How is it measured? Does it affect loyalty? *Journal of Marketing*, 73, 52–68.
- Chatziefsthathiou, D. (2005). *The changing nature of the ideology of Olympism in the modern Olympic era* (Doctoral dissertation). Loughborough University, Loughborough.
- Churchill Jr, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, 16(1), 64–73.
- Connor, P. E., & Becker, B. W. (1994). Personal values and management: What do we know and why don't we know more? *Academy of Management Journal*, 18(3), 550–561.
- Coubertin, P. (1887). English education. In N. Müller (Ed.), *Pierre de Coubertin 1863–1937 – Olympism: Selected writings* (pp. 105–120). Lausanne: IOC.
- Coubertin, P. (1894). The neo-olympism. Appeal to the people of Athens (November 16, 1894). In N. Müller (Ed.), *Lecture given to the parnassus literary society at Athens, Pierre de Coubertin 1863–1937 – Olympism: Selected writings* (pp. 533–541). Lausanne: IOC.
- Coubertin, P. (1931). *Olympic Memoirs*. Lausanne: IOC.
- DaCosta, L. P. (2006). A never-ending story: The philosophical controversy over Olympism. *Journal of the Philosophy of Sport*, 33, 157–173.
- De Waegeneer, E., Van de Sompele, J., & Willem, A. (2016). Ethical codes in sports organizations: Classification framework, content analysis, and the influence of content on code effectiveness. *Journal of Business Ethics*, 136(3), 1–12.
- Edgar, Dunn & Company. (1999). *Olympic global brand assessment and marketing plan*. Typoscript. Lausanne: IOC.
- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39–50.
- Funk, D. (2002). Consumer-based marketing: The use of micro-segmentation strategies for understanding sport consumption. *International Journal of Sports Marketing and Sponsorship*, 4, 39–64.

- Grunert, S. C., & Scherlorn, G. (1990). Consumer values in West Germany: Underlying dimensions and cross-cultural comparison with North America. *Journal of Business Research*, 20(2), 97–107.
- Grube, O. (1997). Olympism is not a system, it is a state of mind. *Olympic Review*, 15, 63–65.
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). Thousand Oaks, CA: Sage.
- Honey, C., & Graham, J. (2005). *The Olympic brand. Sponsorship intelligence*. Typoscript. Lausanne: IOC.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1–55.
- IOC. (1949). *Olympic Charter*. Lausanne: IOC.
- IOC. (2012). *Olympism and the Olympic movement*. Lausanne: IOC Olympic museum.
- IOC. (2013). *Olympic Charter*. Lausanne: IOC.
- IOC. (2014). *Olympic Agenda 2020 – 20 + 20 recommendations*. Lausanne: IOC.
- IOC. (2016a). *Marketing report Rio 2016*. Lausanne: IOC.
- IOC. (2016b). *The fundamentals of Olympic values education* (2nd ed.). Lausanne: IOC.
- IOC. (2017a). *Olympic Charter*. Lausanne: IOC.
- IOC. (2017b). *A two stage approach*. Retrieved from <https://www.olympic.org/news/ioc-launches-a-new-approach-to-the-candidature-process-for-the-olympic-winter-games-2026>
- IPSOS. (2002). *2002 Olympic brand/image tracking results*. Typoscript. Lausanne: IOC.
- Johns, G. (1999). A multi-level theory of self-serving behavior in and by organizations. *Research in Organizational Behavior*, 21, 1–38.
- Kahle, L. R. (1983). *Social values and social change: Adaptation to life in America*. New York: Praeger.
- Kahle, L. R., Beatty, S. E., & Homer, P. M. (1986). Alternative measurement approaches to consumer values: The list of values (LOV) and values and lifestyles (VALS). *Journal of Consumer Research*, 13(3), 405–409.
- Kantar. (2014). *Brand iconography report*. Typoscript. Lausanne: IOC.
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57(1), 1–22.
- Kline, R. B. (2015). *Principles and practice of structural equation modeling* (4th ed.). New York: Guilford Press.
- Könecke, T., Schubert, M., & Preuß, H. (2016). (N)Olympia in Germany? – An analysis of the referendum against Munich 2022. *Sportwissenschaft*, 46(1), 15–24.
- Lenk, H. (1964). *Werte, Ziele, Wirklichkeit der Modernen Olympischen Spiele* [Values, goals, realities of the modern Olympic games]. Schorndorf: Hofmann.
- Lenk, H. (1976). Toward a social philosophy of the Olympics: Values, aims and reality of the modern Olympic movement. In P. J. Graham & H. Ueberhorst (Eds.), *The modern Olympics* (pp. 109–169). West Point: Leisure Press.
- Liese, K. (2011). The social construction of the international Olympic academy as a model of cosmopolis? Between internationalism and world-society: Olympic idea and rational calculus in perspective of relational constructivism. In H. Preuss & K. Liese (Eds.), *Internationalism in the Olympic movement: Idea and reality between nations, cultures, and people* (pp. 75–95). Wiesbaden: Springer.
- MacAloon, J. J. (2008). Legacy as managerial/magical discourse in contemporary Olympic affairs. *The International Journal of the History of Sport*, 25, 2060–2071.
- MacAloon, J. J. (2016). Agenda 2020 and the Olympic movement. *Sport in Society: Cultures, Commerce, Media, Politics*, 19, 767–785.
- Maslow, A. H. (1954). *Motivation and personality*. New York: Harper.
- Milton-Smith, J. (2002). Ethics, the Olympics and the search for global values. *Journal of Business Ethics*, 35, 131–142.
- Mitchell, A. (1983). *Nine American lifestyles: Who we are and where we are going*. New York: MacMillan.
- Naul, R. (2010). *Olympic education* (2nd ed.). Auckland: Meyer & Meyer.

- Naul, R., Binder, D., Rychtecky, A., & Culpan, I. (2017). The promotion of Olympic education by the International Olympic Committee. In R. Naul, D. Binder, A. Rychtecky, & I. Culpan (Eds.), *Olympic education: An international review* (pp. 16–27). London: Routledge.
- Naul, R., Krüger, M., Geßmann, R., & Wick, U. (2017). Germany: Formal Olympic education at schools and informal Olympic learning in sport clubs. In R. Naul, D. Binder, A. Rychtecky, & I. Culpan (Eds.), *Olympic education: An international review* (pp. 177–191). London: Routledge.
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.
- Parry, J. (1988). Olympism at the beginning and end of the twentieth century. *Immutable values and principles and outdated factors – 28th young participants session*. Lausanne: IOA, 81–94.
- Parry, J. (1998). Physical education as Olympic education. *European Physical Education Review*, 4, 153–167.
- Parry, J. (2016). Olympism for the twenty-first century. In Y. V. Auweele, E. Cook, & J. Parry (Eds.), *Ethics and governance in sport: The future of sport imagined* (pp. 27–34). New York: Routledge.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879–903.
- Pruzan, P. (2001). The question of organizational consciousness: Can organizations have values, virtues and visions? *Journal of Business Ethics*, 29(3), 271–284.
- Psimopoulos, C., Binder, D., Vermillion, A., & Naul, R. (2017). United States of America: The Olympic games as promoter of Olympic education in the United States of America: Issues and institutions. In R. Naul, D. Binder, A. Rychtecky, & I. Culpan (Eds.), *Olympic education: An international review* (pp. 291–304). London: Routledge.
- Rokeach, M. J. (1968). The role of values in public opinion research. *Public Opinion Quarterly*, 32, 547–549.
- Rokeach, M. J. (1973). *The nature of human values*. New York: The Free Press.
- Sagie, A., & Koslowsky, M. (1998). Extra- and intra-organizational work values and behavior: A multiple-level model. In C. L. Cooper & D. M. Rousseau (Eds.), *Trends in organizational behavior* (pp. 155–174). New York: John Wiley & Sons.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theory and empirical tests in 20 countries. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 1–65). New York: Academic Press.
- Schwartz, S. H. (2006). Value orientations: Measurement, antecedents and consequences across nations. In R. Jowell, C. Roberts, R. Fitzgerald, & G. Eva (Eds.), *Measuring attitudes cross-nationally – lessons from the European social survey* (pp. 169–203). London: Sage.
- Simmons, C. J., & Becker-Olsen, K. L. (2006). Achieving marketing objectives through social sponsorships. *Journal of Marketing*, 70, 154–169.
- Stadler Blank, A., Koenigstorfer, J., & Baumgartner, H. (2017). Sport team personality: It's not all about winning! *Sport Management Review*. doi:10.1016/j.smr.2017.05.004.
- Wann, D. L., & Branscombe, N. R. (1993). Sports fans: Measuring degree of identification with their team. *International Journal of Sport Psychology*, 24, 1–17.
- Zaichowsky, J. L. (1985). Measuring the involvement construct. *Journal of Consumer Research*, 12, 341–352.