

# ETHICS, ECONOMICS AND COMMON GOODS

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# ETHICS, ECONOMICS AND COMMON GOODS

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## GENERAL INFORMATION

Ethics, Economics and Common Goods Journal aims to be a space for debate and discussion on issues of social and economic ethics. Topics and issues range from theory to practical ethical questions affecting our contemporary societies. The journal is especially, but not exclusively, concerned with the relationship between ethics, economics and the different aspects of the common good perspective in social ethics.

Social and economic ethics is a rapidly changing field. The systems of thought and ideologies inherited from the 20th century seem to be exhausted and prove incapable of responding to the challenges posed by, among others, artificial intelligence, the transformation of labor and capital, the financialization of the economy, the stagnation of middle-class wages, and the growing ideological polarization of our societies.

The journal Ethics, Economics and the Common Goods promotes contributions to scientific debates that combine high academic rigor with originality of thought. In the face of the return of ideologies and the rise of moral neopharisaisms in the Anglo-Saxon world, the journal aims to be a space for rational, free, serious and open dialogue. All articles in the journal undergo a process of double anonymous peer review. In addition, it guarantees authors a rapid review of the articles submitted to it. It is an electronic journal that publishes its articles under a creative commons license and is therefore open access.

## NATURE OF CONTRIBUTIONS

Research articles, research reports, essays and responses are double-blind refereed. To be published, articles, reports, essays must obtain favorable opinions. Responses, however, may be accepted with a single positive opinion and rejected with a single negative opinion. The journal is biannual and publishes two issues per year, in June and December. At least one of these two issues is thematic. The journal is pleased to publish articles in French, English and Spanish.

Further details regarding this paragraph are given in the Editorial Notes.

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# ARTICLES



# DESIGN AND VALIDATION OF A SCALE TO EVALUATE COMMON GOOD LEADERSHIP

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Claudia Malcón-Cervera\*, Cynthia M. Montaudon-Tomas\*\*, Ingrid N. Pinto-López\*\*\* & Manuel Alejandro Gutiérrez-González\*\*\*\*

## ABSTRACT

*This article shows the design and validation of a scale to measure common good leadership. The scale was developed by identifying and incorporating traits and skills or different leadership styles associated with the common good. The Common Good Leadership Scale (CGLS) is developed using gap analysis to reduce the possibility of overconfidence bias. The process of scale design and development is described. Items analyze the ideals regarding common good leadership and specific actions that are performed in an attempt to achieve the common good. The gap is obtained by subtracting the actions minus the ideals, providing valuable information about the leadership traits and skills that need to be developed. Different tests were performed to ensure the validity of the scale including factor analysis.*

Keywords: Common good leadership scale, Design, Validation.

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\*UPAEP Universidad, [claudia.malcon@upaep.mx](mailto:claudia.malcon@upaep.mx)

\*\*UPAEP Universidad, [cynthiamaria.montaudon@upaep.mx](mailto:cynthiamaria.montaudon@upaep.mx)

\*\*\*UPAEP Universidad, [ingrid.pinto@upaep.mx](mailto:ingrid.pinto@upaep.mx)

\*\*\*\*Universidad Tecnológica del Estado de Querétaro, [alejandro.gutierrez@uteq.edu.mx](mailto:alejandro.gutierrez@uteq.edu.mx)



## INTRODUCTION

Leadership for the common good has become one of the most representative leadership styles of modern times that integrates ethical and moral dimensions. However, it is one of the least analyzed and has not been clearly defined. In general, its development is based on the integration of skills that can be identified in other leadership styles, particularly servant leadership, ethical/moral leadership, democratic leadership, transformative leadership, leadership based on values, collaborative leadership, positive leadership, social leadership, prosocial leadership, sustainable leadership, and benevolent leadership.

Existing scales to assess specific leadership characteristics associated with ethical issues tend to incorporate biases; therefore, measurements can be imprecise. This document proposes a validated scale that allows evaluating leadership characteristics for the common good considering the overconfidence bias. This bias has been studied since 1960, and its existence has been demonstrated through a variety of field studies. The consequences of the bias are profound, particularly in professional or expert judgment (Ferretti, Guney, Montibeller & Winterfeldt, 2016).

This bias refers to the tendency of people to be overconfident in their abilities. Generally, people believe that they are more ethical than their competitors, colleagues, and friends. Due to this bias, people often take ethical issues lightly, assuming they have strong character and will and therefore do the right thing when faced with ethical challenges (McCoombs School of Business, 2012).

The overconfidence bias is present in different contexts, and can be classified into three main angles (Boussaidi, 2020). The first refers to poor calibration; that is, people tend to overestimate the precision of their knowledge (Feld, Sauerman, & Grip, 2017; Meier & De Mello, 2019). The second is called the better-than-average effect and explains how people overestimate their abilities in relation to others, considering that they are above average (Johnston, 1967; Svenson, 1981). The third, called attribution, indicates that people attribute their random gains and success to their talents, while considering that failure is only related to external factors such as bad luck (Langer & Roth, 1995; Greenwald, 1980).

In order to reduce the overconfidence bias in the scale, a gap analysis was used. Gap analysis is frequent in empirical studies that analyze leadership.

## SCALE DEVELOPMENT

The Center for Creative Leadership developed a Leadership Gap Indicator to assess core skills such as inspirational engagement, employee leadership, strategic planning, change



management, employee development, and self-awareness (Center for Creative Leadership, 2021). Weiss, Molinaro, and Davey (2010) also analyzed the leadership gap from the skills perspective, which allows identifying limitations in leadership, pointing out that measuring the leadership capacity gap can be done in many different ways, such as through audits, behavioral assessments, or scales. Although previous instruments are valuable, it was considered that a new instrument needed to be developed to analyze particular aspects of the common good in leadership.

The idea for developing a new scale was based on the dimensions for the common good for municipalities and companies developed by Nebel (2018), which can be adapted to the dynamics of the individual. The scale was designed to be self-administered, that is, to be completed without the researcher's presence, and can be delivered physically or digitally. One of the advantages of this type of scale is the low cost involved, the guarantee of anonymity, time savings because it can be administered to a large sample of the population simultaneously, and it is also convenient for the participant, who decides when to answer it.

The design of the scale was developed through different stages. In the first stage, a list of leadership traits and skills from leadership styles connected to common good leadership was collected, analyzed, and sorted (Montaudon-Tomas, Gutiérrez-González, Pinto López & Malcón-Cervera, in this issue). Questions were developed to determine the degree to which students considered possessing or having the abilities and traits. A group of experts evaluated the questions, and some of them were redefined. A pilot test showed substantial bias as most participant responses leaned to the highest levels of the scale, which, based on the perspectives of the experts, was a frequent bias in studies that analyzed ethical concerns as people tend to present themselves in a more favorable light, that is, they think or identify themselves as better than they really are (overconfidence bias). The overconfidence bias was then acknowledged.

In the second stage, an evaluation was carried out with experts from the area of ethics and the common good of the Popular Autonomous University of the State of Puebla (UPAEP), the Technological University of Querétaro (UTEQ), the Institute for the Promotion of the Common Good (IPBC) and the Center for Sustainable Development and the Common Good (CEDS). It was established that the scale had to be modified to eliminate the overconfidence bias. The instrument was completely changed integrating the comments of the experts. The leadership skills with the greatest impact on leadership for the common good were selected, and a double scale was chosen, similar to the SERVQUAL model which was developed to evaluate the quality of service that allows measuring two different aspects of the same criterion (Parasuraman, Zeitham, and Barry, 1985, 1988, 1991) and to identify and measure the gap between them (Arnold & Hatzopoulou, 2000).

The SERVQUAL model –on which the scale was based– presents two questionnaires



that are integrated into one creating pairs. For its development, the area to be analyzed is identified, and the goals and the ideal future are established. Subsequently, the current state is analyzed and compared with the ideal by quantifying the difference: the difference is established by an arithmetic operation of subtracting the current (real) state minus the ideal state.

The items in the scale were not ranked nor organized in specific dimensions. They just included the main traits and skills required for leadership styles connected to the common good.

### COMMON GOOD LEADERSHIP SCALE (CGLS)

The resulting scale is presented as follows:

<b>PART 1 COMMON GOOD IDEALS</b>
1. I am interested in the culture of my region and my country
2. I can plan activities to lead others towards a common goal
3. I am a person of my word
4. I am trustworthy
5. I contribute to the sustainability of my environment
6. My education will allow me to help others in the future
7. I am an active participant in actions with social benefits
8. I am concerned about the well-being of others
9. I am always willing to serve others
10. I am a sharing person
11. I enjoy helping others
12. I believe that life-long-learning creates better employment conditions
13. I can gladly accept suggestions and comments from others
14. I believe that when working together, we can achieve better results
15. I can work in collaboration with others
16. I can delegate responsibilities to others
17. I am an active promoter of diversity and gender equality
18. I can communicate my ideas clearly
19. I acknowledge my own capabilities and vulnerabilities and those of others



20. I want a better future for all
21. I am always willing to help
22. Most of the time, I have a positive attitude
23. I am emphatic
24. I am congruent
25. Challenges and problems do not stop me
26. I consider myself as a prudent person
27. I consider myself as proactive
28. I can step outside of my comfort zone to help others
29. I have the capacity to change
30. I consider myself as autonomous and independent
31. I can easily trust others
32. I acknowledge the participation of others and value their skills
33. I have courage; I show my face, and I do not show cowardice
34. I can give valuable advice
35. I believe that every person has the same right to be respected
36. I am a fair person
37. I respect the dignity of others and my own dignity
38. I am able to accept when I make a mistake
39. I am a transparent and clear person
40. I am a person of integrity
41. I have the capability to guide collective actions
42. I am against all acts of violence
43. I have the ability to lead the efforts of others
44. I always consider the capabilities and merits of others
45. I am an impartial person
46. I am worried about the well-being of the underprivileged
47. I motivate others when they are discouraged
48. I am patient when I am with other people
49. I have a high tolerance to failure when things do not work out as I expected



50. I work for what is better for my community
51. I have a faultless reputation
52. I am an authentic person
53. My actions are a reflection of my values
54. I love my neighbor
55. I am a kind and nice person
56. I am worried about the environment
57. I value the relationships I have built
58. I consider myself as a decent person
59. I value others
60. I believe that I have a great potential
61. I am always available when others need me
62. I am faithful to my convictions and the people around me
63. I am not in search of money or fame
64. I have a positive humor
65. I am a disciplined person
66. I am a discreet person
67. I am a tenacious person
68. I have a critical and strategic thinking
69. I am a responsible consumer
70. I am not a spiteful person

<b>PART II COMMON GOOD ACTIONS</b>
71. Others like to be near me because they believe I have a vast general culture.
72. When I have had to work in teams, I have been able to organize well with others to achieve the expected goals according to schedule.
73. People trust me because I always keep my word, and I am faithful to my promises and dreams.
74. People consider that I am capable of leading others to achieve collective goals.
75. I recycle, recuperate and reuse certain products.



76. I am studying so that I can help give back to my community and my country.
77. I have developed or been an active participant in projects with social impact.
78. When I have realized that someone was not OK, I have asked if I could be of help.
79. Every time I have the opportunity, I act in service of others.
80. When I have encountered a person who does not have the means, food, or knowledge, I have shared what I have with him/her.
81. I participate and/or lead a group that aims at solving a specific problem in my community.
82. I am studying a graduate degree because I believe that I will not be able to be employed without it.
83. I know how to receive constructive criticism.
84. I am an active participant in solving shared challenges
85. When I have worked as a team, I have sought that we all contribute and reach consensual decisions.
86. When working in teams, I have shared leadership with other participants
87. It bothers me when people discriminate against others.
88. When I talk, I can mobilize others to action.
89. I never brag about the achievements I have made, and I am annoyed by people who continually do so.
90. I actively participate in the integral development of those around me.
91. I have helped others even when they have not asked for my help.
92. When I have had problems, I have always tried to see the bright side of things.
93. When someone has had a problem, I have put myself in their shoes to see the situation from their perspective.
94. I always say and do what I think or want.
95. Every time in which I have faced a challenge, I have found a way to overcome it.
96. Even when I am angry, I do not allow my emotions to explode and get the best of me.
97. When facing difficult challenges, I am actively involved in solving them.





98. I have placed the well-being of others before my own interest or my comfort.
99. I have accepted difficult changes in my life without resistance or anger.
100. When I have worked in teams, I do not need to be supervised; I can work independently yet collaboratively.
101. I can join groups or teams and interact with others with ease.
102. I have held constructive discussions praising the knowledge of others.
103. When there is a problem, I face it and accept the consequences.
104. Others come to me for advice.
105. I treat everyone with the same respect regardless of their religion, sexual orientation, ethnicity, gender, or disability.
106. I always try to give the proper recognition to those who deserve it.
107. When I have seen that someone is humiliating another person, I have intervened to stop the humiliation.
108. When I have made a mistake, I have accepted it and taken responsibility for it.
109. I never lie or hide information from my family or friends.
110. I have never committed dishonest acts against myself or others.
111. I believe that others see me as a leader.
112. When working in teams, I am usually the leader who organizes the efforts of others to obtain the best results.
113. I have not participated in arguments or physical attacks against others at the university, a party, or a public space.
114. People feel taken into consideration by me when working together.
115. Others can give their opinion without fear that either I or others would make fun of their ideas.
116. I have made donations (money, time, or others) to support noble causes
117. I have supported my friends when they have had difficulties, cheering them on so that they continue going.
118. I never lose my temper when others make a mistake or take their time to solve something.
119. When things have not turned out as I expected, I have not given up.



120.	I always obey the rules and regulations for social coexistence.
121.	I lead by example because no one can imply that I have misbehaved or lack ethics.
122.	I have never pretended to be someone I am not.
123.	When making a decision, I use the values that I learned in my family as guidance.
124.	I have done actions of charity and compassion towards others.
125.	People come to me because I am a caring person.
126.	I never through garbage on the streets, and when I see garbage, I will pick it up and dispose of it properly.
127.	I invest my time in maintaining and improving my relationships with family, friends, and acquaintances.
128.	I am bothered when others perform immoral acts.
129.	I learn the names and last names of the people I work with when joining teams.
130.	I believe that I have the capacity to achieve great things.
131.	I am always willing to help others regardless of the moment or situation.
132.	People value my friendship because I am loyal.
133.	I never use my leadership for my benefit.
134.	My happiness is contagious.
135.	I always finish the tasks that I have been assigned on time and do not leave them for later.
136.	When I have been entrusted with a secret, I have been responsible and have kept it to myself.
137.	I do not have any projects that I left holding and that I did not finish.
138.	Others acknowledge that my arguments are solid and well-grounded.
139.	I buy certain products for ethical or economic reasons, regardless of the price.
140.	When someone does something that hurts me, I forgive him/her easily.

Source: Developed by the authors, 2021.



Participants in the study were not made aware that the scale was based on a gap analysis.

## VALIDATION METHODOLOGY

Since the objective was to validate the Common Good Leadership Scale, factor analysis was conducted with an adequate sample size. This analysis examined the interdependence relationships of the correlated variables (Hair, Anderson, Tatham & Black, 1995).

Primary information was collected through online surveys from Business School students since Business Schools have been considered cradles of leadership. Two educational institutions participated in the pilot: UPAEP University and the Technological University of Querétaro. These Institutions were chosen because both of them have research centers related to the common good, have been incorporating the common good pedagogy as part of their educational models, and were interested in identifying relevant aspects about the way in which both institutions were promoting the development of leaders with a common good perspective. Data was obtained in the end of 2020 and later analyzed using the SPSS software, version 21.0.

The measuring instrument consisted of 2 sections, the first one aimed to collect data to classify the respondent, and in the other section, data was collected about the students' perception of leadership for the common good using a 7-point Likert scale, ranging from "completely disagree" (1) to "completely agree" (7).

## SAMPLE SIZE

Regarding the sample size, Mahlotra (2004) suggests that it must be integrated by at least 100 participants or higher. As a general rule, it is appropriate to have at least 4 or 5 observations (surveys) for each variable that is being analyzed. When dealing with smaller samples, the analyst must always interpret the results with care. Hair et al. (1995) indicated that if a study is being designed to evaluate a proposed structure, then it must be ensured that it includes five or more variables that can represent each proposed factor. For the purpose of this research, there were 70 paired variables and a total of 630 surveys, so there were nine observations per variable.

## FACTOR ANALYSIS PREMISES

Factor analysis must ensure that the data matrix has sufficient correlations to justify its application. There are formal statistics to verify if the factorial model is appropriate. Bartlett's sphericity test (Hair et al., 1995; Visauta & Martori, 2003; Mahlotra, 2004) is applied to verify the null hypothesis that the variables are not correlated in the population, that is, the correlation matrix of the population is an identity matrix where all the coefficients on the diagonal are 1, and the others are 0. A large value of the statistic



test and a lower degree of significance will favor the rejection of the null hypothesis. If it cannot be rejected, it is not recommended to carry out a factor analysis with the data.

Another useful statistic is the Kaiser-Meyer-Olkin measure of the adequacy of the sample (Hair et al., 1995; Visauta & Martori, 2003; Mahlotra, 2004), also called KMO, which compares the magnitudes of the coefficients of the observed correlation with the magnitudes of the partial correlation coefficients. Small values of KMO indicate that correlations between pairs of variables are not explained by other variables, and that factor analysis may not be appropriate. For Kaiser (1974, cited in Visauta & Martori, 2003) the values are the following:

- 1 >= KMO > 0.90 are considered excellent
- 0.90 >= KMO > 0.80 are considered good
- 0.80 >= KMO > 0.70 are considered appropriate
- 0.70 >= KMO > 0.60 are considered mediocre
- 0.60 >= KMO > 0.50 are considered bad
- KMO < 0.50 are considered unacceptable

For this research, the determinant of the correlation matrix was .000. Furthermore, as Table 1 shows, the results of the Bartlett and KMO tests were satisfactory; therefore, factor analysis was appropriate.

**Table 1.**  
*Bartlett and KMO test results*

<b>KMO</b>	.972	
<b>Bartlett's sphericity test</b>	Chi-squared	29002.584
	gl	2415
	Sig.	.000

Source: Elaborated by the authors with SPSS software.

## DETERMINATION OF THE FACTOR ANALYSIS METHOD

The component or Principal Component Analysis method was chosen since the objective was to reduce most of the original information –variances– into a minimum number of factors. Seventy variables were used in the study, and the first analysis produced 11 factors to explain 62.697% of the data (See Table 2). This is because only factors with eigenvalues greater than 1 are considered significant; the other values are discarded (Hair et al., 1995; Visauta & Martori, 2003; Mahlotra, 2004).



## INTERPRETATION OF THE FACTORS

Three steps are involved in defining the final factor solution. The first is the matrix of non-rotated factors, which assists in obtaining a preliminary indicator of the number of factors to extract. Non-rotated factor solutions achieve the goal of data reduction, but, most of the time, they do not offer the most adequate interpretation of the examined variables (Hair et al., 1995). The factor load is the means of interpreting the role played by each variable and the factor because they indicate the degree of correlation or correspondence between the variable and the factor; with higher loads, the variable is more representative of the factor. The non-rotated factor solution, shown in table 2, may or may not provide a meaningful pattern of variable loading, and rotation will generally be desirable because it simplifies the factor structure.

**Table 2.**  
*Factors solution not rotated*

Component	Initial eigenvalues			Sum of the squared saturation of the extraction		
	Total	Variance %	Accumulated %	Total	Variance %	Accumulated %
1	28.286	40.409	40.409	28.286	40.409	40.409
2	2.780	3.971	44.380	2.780	3.971	44.380
3	2.344	3.348	47.728	2.344	3.348	47.728
4	1.956	2.794	50.522	1.956	2.794	50.522
5	1.456	2.079	52.601	1.456	2.079	52.601
6	1.390	1.986	54.587	1.390	1.986	54.587
7	1.306	1.865	56.452	1.306	1.865	56.452
8	1.173	1.676	58.128	1.173	1.676	58.128
9	1.110	1.585	59.713	1.110	1.585	59.713
10	1.071	1.530	61.243	1.071	1.530	61.243
11	1.018	1.454	62.697	1.018	1.454	62.697

Source: Developed by the authors with SPSS software.

The second step employs a rotational method to achieve simpler and meaningful factor solutions. In most cases, rotating the variables improves interpretation by reducing some of the ambiguities that often accompany the initial non-rotated factor solutions.



There are several rotational methods, for instance, orthogonal, such as *varimax*, *equamax*, *quartimax*, and obliques, such as *promax* and *direct oblimin*. According to Hair et al. (1995), the choice of an orthogonal or oblique rotation should be made based on the particular needs of a given research problem. If the researcher wants to reduce a large number of variables to a smaller set of uncorrelated variables for subsequent use in a regression or other prediction technique, an orthogonal solution is recommended. However, if the ultimate goal of factor analysis is to obtain several constructs or factors with theoretical significance, an oblique solution is appropriate.

In this research, the number of variables will be reduced to a smaller set of uncorrelated variables; therefore, it was decided to use an orthogonal array, specifically the *varimax* method. In addition to being the most widely used, this method tries to minimize the number of variables with high loads in each factor. Table 3 shows the results of the rotated factor with the varimax method.

**Table 3.**  
*Rotated factor solution*

Component	Sum of the squared saturations of the rotation		
	Total	Variance %	Accumulated %
1	8.742	12.488	12.488
2	7.160	10.229	22.717
3	4.931	7.045	29.762
4	4.705	6.722	36.484
5	3.550	5.071	41.555
6	3.530	5.043	46.597
7	3.491	4.986	51.584
8	2.693	3.847	55.431
9	2.052	2.931	58.362
10	1.622	2.318	60.680
11	1.412	2.017	62.697

Source: Developed by the authors with SPSS software.

In the third step, the factor analysis evaluates the need to refine the factor model due to (1) the deletion of some variable(s), (2) the desire to use a different rotation method for the interpretation, (3) the need to extract a different number of factors, or (4) the desire to switch from one extraction method to another (Hair et al., 1995).



Comrey (1973; 2013) reports that factor load levels above 0.45 are considered valid, above 0.55 are considered good, above 0.63 are considered very good, and above 0.71 are excellent. On the other hand, Hair et al. (1995) report that the loads of the factors greater than  $\pm 0.30$  are considered to meet the minimum level of acceptance, loads of  $\pm 0.40$  are considered more important, and if the loads are  $\pm 0.50$  or higher they are considered practically significant.

After interpreting the complex interrelationships represented in the factor matrix, the resulting measurements showed, in general, a high degree of clustering; that is, the elements or questions that form them reached a high level of factor loading for the same factor, requiring only some modifications to refine the measurements, which consisted in the elimination of 4 of the 70 items or questions because they were not grouped correctly or logically in the valid measurements, or because the factor load level had a minimum level of acceptance (see table 4).

**Table 4.**  
*Results of factor analysis*

Variable number	Factor load	Rotated factor varimax	Modifications	Dimension definition
36	.653	1	Eliminated	
4	.472	1	Adjusted	Self-control/self management
38	.513	1	Adjusted	
39	.526	1	Adjusted	
40	.557	1	Adjusted	
62	.576	1	Adjusted	
3	.384	1		
20	.652	1		
32	.401	1		
33	.378	1		
34	.387	1		
35	.740	1		
37	.732	1		
42	.650	1		
44	.656	1		
47	.463	1		
59	.581	1		



Variable number	Factor load	Rotated factor varimax	Modifications	Dimension definition
8	.676	2	Adjusted	Logic of the gift
9	.696	2	Adjusted	
10	.661	2	Adjusted	
11	.748	2	Adjusted	
21	.616	2	Adjusted	
55	.455	2	Adjusted	
1	.476	2		Sustainability
5	.508	2		
6	.441	2		
7	.504	2		
17	.408	2		
46	.378	2		
56	.541	2		Congruence
52	.516	3		
53	.538	3		
54	.483	3		
57	.561	3		
58	.590	3		
60	.588	3		
61	.516	3		
64	.365	3		
24	.602	4	Eliminated	Flourishing
18	.413	4		
19	.375	4		
22	.465	4		
23	.428	4		
25	.673	4		
26	.522	4		
27	.608	4		
30	.529	4		
65	.610	5		Responsibility
66	.576	5		
67	.611	5		
68	.351	5		
69	.366	5		
70	.611	5		





Variable number	Factor load	Rotated factor varimax	Modifications	Dimension definition
2	.698	6		Management
16	.499	6		
31	.411	6		
41	.514	6		
43	.557	6		
28	.513	7		Resilience
29	.458	7		
48	.510	7		
49	.607	7		
50	.528	7		
13	.554	8		Collaboration
14	.537	8		
15	.621	8		
45	.549	9		Justice
51	.605	9		
12	.616	10	Eliminated	
63	.387	10	Eliminated	

Source: Developed by the authors with SPSS software

The results obtained through the factor analysis allowed to validate eleven measurements, which correspond to the dimensions of common good leadership. These factors are shown in table 5.

**Table 5.**  
*Dimensions of leadership for the common good*

	Dimensions
1	Self-control/self management
2	Solidarity
3	Logic of the gift
4	Sustainability
5	Congruence
6	Flourishing
7	Responsibility
8	Management
9	Resilience
10	Collaboration
11	Justice

Source: Developed by the authors



Once the factors were identified, the different items in each factor were reviewed and compared to notions connected to the common good to establish a clear designation of each dimension.

For the design of the scale, and from the perspective of the common good, the identified factors were defined as follows:

**Solidarity** is a matter of justice and is focused on the common good (Catholic Parliament Office, 2016). It is a quality of human association, specifically a cohesive bond that holds a group together due to some conscious or intentional commitment. Individual assets become common assets through the interest that others invest in them (Regh, 2018). Solidarity is also the virtue that allows to share material and human goods fully. True solidarity implies recognizing the value of others as equals and is achieved when one puts one's own life at the service of others (Benedict XVI, 2008). It includes the firm desire for the common good, taking the necessary actions to achieve it. It is not a sense of compassion for the less privileged but a firm determination, commitment, and responsibility (John Paul II, 1987).

**Self-control and self-management.** Leadership has an element of power or dominance over others, but this power or mandate will not make sense if the leader does not have dominion over themselves. The Greek philosophers (Socrates, Plato, Aristotle) called this virtue *enkrateia* (enkratos), and they wanted to signify the government of oneself, this virtue shows and presupposes a high level of culture. The person who possesses this virtue is in control of their own passions and instincts, they do not allow themselves to be governed or carried away by pleasure or pain (Jaeger, 1957; Pieper, 2017). The opposite of this virtue is intemperate; not having power or control over oneself, it is also called weakness. When the person has acquired this excellence, harmony can be achieved between the moral existence of man and the natural order of the universe. It is based on the principles of self-control and self-regulation that are of great benefit both individually and in life together (Baumeister & Alquist, 2009). It is a change designed to bring something to conformity with the standard, a conscious effort at self-regulation, and the capacity for rational action to achieve social benefits.

**Sustainability** is a principle of moral-social action (YouCat Foundation gGmbH, 2016) that integrates three dimensions: economic development, management of natural resources and protection, equity, and social inclusion (UN, 2020). This principle is intrinsically linked to moral-social action for the common good, insofar as at the center is the dignity of the person, their basic and inalienable rights for a true integral human development. The principle of sustainability seeks the good of all people and their full development, not only for the people of the present but also considers future generations (Francisco, 2015), creating a commitment to develop prosperous and healthy communities for this generation and those to come (University of California Santa Barbara, 2020).



As for the **logic of the gift**, by living continuously within the dynamics of truth and charity, the human being experiences the gift in themselves: it is made by and for the gift. This dynamic between truth and charity is nurtured by hope, which sustains reason and gives strength to the will; in this way, it transcends all laws of justice. This does not mean that justice is eliminated or juxtaposed to it as something external that is added to it, but rather that it supposes it and is the minimum measure of charity (Galindo, 2013). The gift exceeds the merit, and its norm is to abound; it is an expression of fraternity together with the principle of gratuity. Thanks to charity and truth, the foundation and strength of the community are possible, and thanks to them, the logic of the gift is a requirement since an expression of this logic is the communion of goods as social aid. It is not opposed to the logic of contractual exchange or political logic, but it is against the logic of the strongest. The logic of the gift is developed with the principles of friendship, sociability, reciprocity, and trust (Benedict XVI, 2008).

**Congruence** is the way in which a person behaves in front of others. Personal congruence is about integrity, being honest to oneself and others about what one values and believes, and reflecting those beliefs through personal behavior and actions (Minnesota State University Mankato, 2018). It is behaving as one really is. It is the space between the true self and the ideal self (Celis, 2016). Consistency is essential because it is founded on truth, honesty, and integrity. Value congruence is the degree to which an individual's values match those found in their work environment (Molina, 2016) in their families and the society as a whole.

**Flourishing.** The concept of Aristotelian *eudaimonia* has been generally translated as happiness, but in recent years the term "flourishing" has begun to be used to understand the relationship of the phrase "is good for" in "what is good for X depends on what X is" (Riordan, 2016). Thus, if *eudaimonia* is what everyone ultimately seeks in their actions, human flourishing is identified with a life of morally virtuous action. The things that are good for us as human beings are those that play a role in living our flourishing (prosperous) lives (Wolbert, de Ruyter, & Schinkel, 2015). Interestingly, this approach is closely linked to the interest of protecting the freedom of individuals to choose their own conception of good. It is also considered an ideal of education since it is the updating of human faculties (powers) that seek objective goods throughout life.

**Responsibility** is an attribute for which the author of a human act (an act performed with full knowledge of the intelligence and full consent of the will) must account for it, answer for their actions before an authority. Depending on the circumstances of the human act, it is to whom an answer should be given, be it a moral, legal or social authority. This does not mean that it is an ethic of consequences or utilitarianism (Inciarte, 1980). However, that responsibility has its foundation in human nature itself from the natural moral law, a rational arrangement for the common good (De Aquino, 2011), which seeks the "flourishing" or development of the human person and the community.



**Management** can be defined as the set of actions or procedures that allow an initiative or a project to be carried out with the ability to handle or conduct any problematic situation that arises (RAE, 2021a). Management suggests efficiency, planning, control, consistency (Hughes et al., 2019). Management makes organizations possible, and good management makes them, and society as a whole, more prosperous (Magretta, 2012).

**Resilience** is identified as the capacity that enables people to survive, adapt and thrive even in adverse conditions and can be naturally built or deliberately developed (Smith, 2018). Resilience is also the ability of a person or a social system to live well and develop positively despite difficult living conditions (Vanistendael, 1994). Despite being exposed to stress, the person develops social, academic, and vocational skills in this process. There is convergence between resilience and the common good since the community in which people develop is in which the common good can develop and be exercised (Angulo, Noriega, Noriega, & Castillo, 2016).

**Collaboration** refers to working with other people to carry out a project (RAE, 2021b). For Schuman (2006), collaboration is the process where two or more people or organizations work together to complete a task or achieve a goal and has been considered as a powerful strategy to achieve a vision otherwise not possible when independent entities work alone (Gajda, 2004). Collaboration is a skill that needs to be taught. It includes listening and asking questions, creating empathy and making people comfortable with feedback, increasing self-awareness delegating, and communicating with clarity (Gino, 2019).

**Justice (fairness)** is understood as a state free from biases or injustices; the action of social institutions for the benefit of human rights, which guarantees equal life opportunities. It entails that people are treated according to their condition as human beings and that decisions are made impartially, objectively, and with respect.

## FACTOR ANALYSIS VALIDATION

The validation of any factor analysis is essential since it involves evaluating the degree of generalization of the results to the population. The generalization problem is critical for this multivariate statistical method because it describes a data structure that must be representative of the population. The most direct method of validation of results is the confirmatory perspective and evaluation of the replicability of the results, either with a divided sample of the original data set or with a separate sample (Hair et al., 1995).

## VALIDATION WITH THE SPLIT-HALF METHOD

To carry out the validation, this study was divided into two samples: one with the 315 even-numbered observations and the second with the 315 odd-numbered observations. A factor analysis was conducted for each sample, and both resulting models were



compared. Table 6 shows the factor solution rotated with the varimax method of the *even* and *odd* samples. Both results are very similar, explaining between 66.8% and 66.1% of the variance with 14 and 11 factors respectively. In addition, the common values – communalities– also show significant similarity (see table 7).

**Table 6.**  
*Solution of even and odd rotated factors*

Component	Even solution			Odd solution		
	Rotation Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of variance	% accumulated	Total	% of variance	% accumulated
1	6.226	8.894	8.894	30.493	43.561	43.561
2	5.268	7.526	16.419	2.840	4.057	47.618
3	5.196	7.423	23.842	2.351	3.359	50.977
4	4.202	6.002	29.845	2.054	2.935	53.912
5	3.928	5.612	35.456	1.450	2.072	55.983
6	3.415	4.878	40.335	1.399	1.999	57.982
7	3.374	4.820	45.155	1.286	1.838	59.82
8	3.052	4.360	49.515	1.168	1.669	61.489
9	2.594	3.706	53.221	1.140	1.628	63.117
10	2.139	3.056	56.277	1.085	1.549	64.666
11	2.101	3.002	59.279	1.045	1.494	66.16
12	1.892	2.703	61.982	0.000	0.000	0.000
13	1.816	2.594	64.576	0.000	0.000	0.000
14	1.566	2.238	66.814	0.000	0.000	0.000

Source: Developed by the authors using SPSS software

**Table 7.**  
*Commonalities values of the Even and Odd solutions*

Variable number	Extraction Pair	Odd extraction	Difference
1	0.556	0.506	0.050
2	0.702	0.659	0.043
3	0.675	0.641	0.034
4	0.695	0.693	0.002
5	0.621	0.613	0.008
6	0.615	0.630	0.015



7	0.672	0.608	0.064
8	0.695	0.703	0.008
9	0.692	0.674	0.018
10	0.705	0.689	0.016
11	0.743	0.794	0.051
12	0.644	0.686	0.042
13	0.687	0.651	0.036
14	0.653	0.669	0.016
15	0.741	0.702	0.039
16	0.589	0.646	0.057
17	0.625	0.566	0.059
18	0.712	0.619	0.093
19	0.658	0.642	0.016
20	0.671	0.681	0.010
21	0.702	0.724	0.022
22	0.771	0.681	0.090
23	0.561	0.621	0.060
24	0.580	0.731	0.151
25	0.693	0.628	0.065
26	0.615	0.636	0.021
27	0.705	0.681	0.024
28	0.677	0.651	0.026
29	0.597	0.591	0.006
30	0.647	0.540	0.107
31	0.639	0.665	0.026
32	0.675	0.727	0.052
33	0.588	0.709	0.121
34	0.684	0.566	0.118
35	0.666	0.753	0.087
36	0.680	0.669	0.011
37	0.754	0.779	0.025
38	0.674	0.689	0.015
39	0.635	0.658	0.023
40	0.720	0.730	0.010
41	0.702	0.686	0.016
42	0.677	0.630	0.047
43	0.741	0.733	0.008
44	0.723	0.722	0.001
45	0.541	0.567	0.026
46	0.707	0.647	0.060
47	0.723	0.595	0.128



48	0.734	0.611	0.123
49	0.663	0.630	0.033
50	0.694	0.703	0.009
51	0.659	0.614	0.045
52	0.555	0.617	0.062
53	0.692	0.661	0.031
54	0.624	0.616	0.008
55	0.679	0.731	0.052
56	0.710	0.600	0.110
57	0.693	0.728	0.035
58	0.606	0.719	0.113
59	0.709	0.764	0.055
60	0.703	0.668	0.035
61	0.634	0.743	0.109
62	0.751	0.746	0.005
63	0.598	0.568	0.030
64	0.665	0.720	0.055
65	0.607	0.629	0.022
66	0.689	0.577	0.112
67	0.729	0.772	0.043
68	0.641	0.703	0.062
69	0.612	0.500	0.112
70	0.696	0.613	0.083

Source: Developed by the authors with SPSS

## RELIABILITY TESTS

Once the measurements resulting from the Factor Analysis were defined in the final sample, the reliability was validated by applying a Cronbach's alpha test. As shown in Table 8, the alphas found for measurements 1 to 10 are acceptable according to the criteria of Nunnally (1987), which considers that alphas between 0.50 and 0.60 should be sufficient, and Cronbach (1951) establishes that alphas with a value greater than 0.65 are acceptable. Measurement number 11 is only validated with the criterion of Nunnally (1987). In this way, it is shown that the proposed measurements have a good level of reliability or internal congruence.



**Table 8.**  
*Cronbach's alpha reliability tests*

	Measured variable	Number of measured elements	Alfa
1	Self-control/ self-management	5	0.847
2	Solidarity	11	0.914
3	Logic of the gift	6	0.900
4	Sustainability	7	0.814
5	Congruence	8	0.882
6	Flourishing	8	0.873
7	Responsibility	6	0.790
8	Management	5	0.819
9	Resilience	5	0.788
10	Collaboration	3	0.783
11	Justice	2	0.520

Source: Developed by the authors with SPSS software

Additional analyses were performed to determine how the different types of leadership connected to the common good were represented in the dimensions obtained through the factor analysis.

**Table 9.**  
*CGLS Scale dimensions associated with common good-related leadership styles*

Leadership style	Solidarity	Self-management	Sustainability	Logic of the gift	Congruence	Flourishing	Responsibility	Management	Resilience	Collaboration	TOTAL
Authentic		X		X	X	X					4
Benevolent	X			X							2
Civic	X	X	X			X	X			X	6
Collaborative	X		X					X		X	4
Courageous	X	X		X	X		X	X	X	X	8
Democratic	X	X	X				X	X			5
Ethical	X			X	X		X				4





Exemplary	X	X	X	X	X	X	X			X	7
Humanistic	X		X	X	X	X	X			X	7
Inclusive	X		X	X				X		X	5
Integrative	X		X	X				X		X	5
Meaningful		X	X	X	X	X		X		X	7
Moral			X	X	X	X	X				5
Positive		X	X	X	X	X	X		X	X	8
Prosocial	X		X	X		X	X	X		X	7
Regenerative		X	X	X	X	X			X	X	6
Responsible	X		X		X		X	X		X	6
Servant	X			X				X		X	4
Shared	X			X				X		X	4
Social justice	X		X	X			X		X		5
Social			X	X		X	X	X		X	6
Spiritual				X			X				2
Sustainable			X				X	X	X		4
Transformational		X		X	X	X			X	X	6
Value-based	X			X	X					X	4
Virtuous	X	X				X				X	4
Visionary			X	X	X	X		X	X		6

Source: Developed by the authors

In table 9, the different leadership styles are cross analyzed regarding the different dimensions of the scale. As can be observed, courageous and positive styles are connected eight out of the eleven dimensions selected. Exemplary, humanistic, meaningful, and prosocial leadership styles are connected with seven dimensions each, while visionary, transformational, social, responsible, regenerative, and civic leadership styles connect to six dimensions each.

## CONCLUSIONS AND FURTHER RESEARCH

This article proposed a scale to evaluate leadership for the common good with the goal of reducing the overconfidence bias which is present in studies that analyze ethical behaviors. Although the instrument was designed to compare ideal and real behaviors, it is still possible that there is certain bias, as the actions are not being confirmed and the instrument relies exclusively in the answers that participants provide.

Different actions were taken to design and validate the scale. There was a theoretical



analysis from which variables were identified and then constructed into items, and expert analysis and pilot testing sessions were conducted. When the final scale was developed it was administered to large samples of participants so that there would be enough data to perform the required tests to determine the validity and reliability and to reduce the number of items identifying the relevant factors.

The items in the scale were developed through an analysis of leadership traits and skills, and common good principles. Although the resulting factors or dimensions were defined considering human virtues are not absolute or concrete, each virtue integrated other virtues in their definitions.

The scale was constructed with two paired Likert scales which allowed various degrees of opinions which then were compared to identify the gap. Results from the scale can be analyzed in different ways, for instance the gap, but also, there can be additional analysis with regards to the ideals of common good leadership or actions that participants perform towards achieving the common good.

So far, the scale has been applied in two different educational institutions, and it is expected to be applied in three additional universities during 2022. It is important to acknowledge that the instrument was designed in Spanish and that some fine distinctions between certain skills and traits might have been lost in translation.

Through factor analysis, it was confirmed that the variables developed to measure Common Good leadership can be summarized into eleven factors or dimensions. Additionally, the statistical analysis shows that the instrument fulfills the following criteria:

- a. Construct validity.** It was determined by factor analysis. The results obtained from the factor analysis indicate that there are 11 factors (dimensions).
- b. Reliability.** The Cronbach's alpha coefficients of the eleven resulting factors (dimensions) were determined; their values were high enough to be validated with the Nunnally and Cronbach criteria. Through the split-halves method (Split-halves), with samples of 315 observations each, it was possible to explain the 66.8% and 66.1% variance, respectively.
- c. Content validity.** It was determined through a panel of experts who reviewed and improved the writing of the items, leaving only those pertinent to the instrument.
- d.** From the statistical processes used to validate the instrument that measures Leadership for the Common Good, it can be affirmed that the instrument is valid and reliable.

In terms of further studies, expanding the factor analysis with additional observations



from other educational institutions will help to fine-tune the scale if needed. The dimension of Justice needs to be re-evaluated and additional items need to be incorporated to achieve higher levels of reliability, since it is the dimension with the lowest values, and the fewest items.

It is expected that the scale will be refined so that it can provide valuable information that can further develop, and question, emerging theories regarding common good leadership.

*Claudia Malcón-Cervera\**, *Cynthia M. Montaudon-Tomas\*\**, *Ingrid N. Pinto-López\*\*\** & *Manuel Alejandro Gutiérrez-González\*\*\*\**

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\*Full-time professor and researcher at the Business School of the Universidad Popular Autónoma del Estado de Puebla (UPAEP), since 2007. She holds a bachelor's degree in Computer Systems, a master's degree in Administration and a doctorate in Strategic Planning and Technology Management from UPAEP.

\*\*Full-time professor and consultant at the Business School at UPAEP in Puebla, Mexico. She holds a post doctorate in Organizational Leadership, a PhD in Business, and a PhD in Strategic Planning. She also holds an MBA, a Master in Quality Engineering and a Master in Communication Sciences. She is head of the Observatory on Competitiveness and New Ways of Working and member of the National System of Researchers, Level I

\*\*\*Full-time professor and researcher at the Faculty of Business Administration and Intelligence, at UPAEP University, Puebla, Mexico. She is currently coordinator of the international arbitration of the Latin American Association of Faculties and Schools of Accounting and Administration (ALAFEC), and member of the National System of Researchers. Her research interests include topics related to project management and direction, new ways of working, bibliometric analysis, and multivariate fuzzy logic.

\*\*\*\*Mechatronic Engineering from la Salle University México (ULSA) and Bionic Engineering at the National Polytechnic Institute (IPN). He has a degree in Philosophy and a Master's in Administration from UPAEP University, a Master's in Social Ethics from the Center for Research in Social Ethics (CIES- Aletheia Foundation), a Master's in Humanities and a PhD in Humanities by the University Center of Mexico City (UCIME). He is currently a professor at the Technological University of the State of Querétaro (UTEQ) and at the Anáhuac Querétaro. He is Director of the Center for Sustainable Development and the Common Good, Director of the Blaise Pascal Chair and Director of the Società Internazionale Tomasso d'Aquino, Mexico (youth section).



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