The total contribution of the direct and indirect influence of servant leadership on innovative work behavior

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ABSTRACT

This study aimed to determine the total contribution of servant leadership variables directly or indirectly to the innovative work behavior of high school teachers. The research respondents were 158 teachers from Jakarta Capital Special Region, Bogor Regency, Bekasi City, and Bandung Regency, Indonesia. Data analysis technique using path analysis. The results showed that the total direct and indirect contribution of servant leadership variables to innovative work behavior through knowledge sharing was 97.3%. The remaining 2.7% comes from variables not examined in this study. The implications of this research can be used by school principals and education policymakers at the national and regional levels to strengthen servant leadership to create knowledge sharing in strengthening the innovative work behavior of teachers in senior high schools.

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1. INTRODUCTION

Teachers have a strategic role in determining the success of a country's education because they act as learning leaders, facilitators, and at the same time centers of learning initiatives. One of the strategic roles of teachers in schools is influenced by the creativity and innovation of teachers in teaching [1]. A creative education system is born from a culture that enlivens creativity, innovation, and productivity. Therefore, teachers need to continue to innovate through the creation of new ideas and continuous innovation through good learning methods, strong motivation, and smart use of technology. To be able to become an innovative teacher needs to be supported by maximum teacher competence [2].

Teacher competence which includes pedagogic, personality, professional, and social is reflected in the teacher's performance which is displayed during daily work behavior in teaching [3]. All of these competencies can be optimized properly if they have innovative work behavior [4]. This can happen because innovative work behavior can generate creativity and innovation to answer the challenges of an increasingly complex world. Innovative work behavior (IWB) in the school context requires teachers to create innovative ideas by motivating students and co-workers to get involved [5]. The involvement of various parties in the learning process makes the quality of education increase according to the learning objectives because there are more and more innovative thoughts and ideas that can support a quality learning process.

IWB can be defined as an employee's action directed at the products, processes, and methods of his or her job position, departmental unit, or organization. Examples of such behavior include seeking out new technologies, recommending new strategies to achieve goals, applying new work methods, and procuring

support and resources to implement novelty ideas. A study conducted by the Agency for Research and Developments (BALITBANG) Ministry of Education and Culture in 2017 revealed the fact that in general teachers had carried out their duties and functions as teachers according to regulations. However, this learning behavior is more than just carrying out teaching tasks and functions that have not been accompanied by the development of ideas and creative behavior. Even though the current condition of teachers is required to innovate in teaching [6]. This is necessary because in the Industrial Revolution Era 5.0, teachers must be modifiers for students to improve their competencies. This has resulted in every country trying to include teachers in training to increase teacher creativity [7].

Innovative work behavior is composed of the intentional introduction and application within a role, group, or organization of ideas, processes, products, or procedures that are new to the relevant unit of adoption and designed to significantly benefit the individual, the team member, or the organizations [8]. IWB is behavior consisting of complex integrated activities about opportunity exploration, idea generation, idea promotion, and idea implementation with the intent of benefit to the organization, work role unit, and individuals [9]. IWB is behavior directed at generating ideas, applying and implementing superior ideas, products, processes, and methods for work positions, departmental units, or organizations [10]. Through innovative behavior that is owned by individuals in the organization, it is expected to be able to build the organization into an innovative organization. Individual innovation behavior is grouped into two dimensions, namely the dimension of creativity-oriented work behavior which includes problem identification and generating ideas, while the promotion of ideas and the realization of ideas are included in the work behavior dimension which is oriented towards implementing ideas. IWB can be divided into three stages: idea generation, coalition building, and implementation [11].

IWB is limited by deliberate efforts under individual control to go beyond formal job requirements and to generate something superior [12]. IWB is an individual behavior to generate excellence beyond the required standards [13]. The IWB foundation begins with individual contributions to the development of organizational innovation [14]. The stages of IWB are as: first, the process stage includes the creative stage which refers to recognizing problems and generating ideas at the individual level, and secondly, the implementation stage refers to achieving and implementing innovative ideas in organizational practice [15]. Employees who are innovative at work will emphasize the individual willingness to uphold innovation in their work by improving the way they work, communicate, use computers, or develop new services or products, for the effectiveness and success of the organization [16].

High or low teacher innovative work behavior can be seen from the IWB idea exploration indicator, namely identifying problems and looking for opportunities to solve them [17]. Exploring ideas is interpreted as a search for self-ability to develop appropriate teaching strategies in the teaching and learning process for students. This is evident from the results of a survey regarding the lack of teachers' ability to transform knowledge and skills to students. It is known from the percentage of teachers who received a score of 7, meaning that they were sufficient in mastering the material in their field of study, the number was relatively small, namely 38.96%, the remainder compared to those who scored less than 6. This is of course quite worrying because it can have an impact on the quality of the learning process.

The next fact about the lack of innovative work behavior in terms of creativity is explained in the results of a study of North Jakarta High School teachers which described that only 53% of North Jakarta High School Principals thought that their teachers' performance had creativity and 55% that they assume that their teacher has the initiative in carrying out learning. This strengthens the results of previous research that teachers must be taught soft skills to strengthen students' positive character in the learning process [18]. These facts are interesting and worthy of research to reveal what factors are behind why teachers' teaching creativity still needs to be improved more optimally.

One of the factors thought to have an influence on IWB is knowledge sharing and servant leadership [1], [2]. Servant leadership is someone who becomes a servant first, which starts from a natural feeling that someone wants to serve and must serve first, which then becomes someone's conscious choice to lead [3]. There are 10 characteristics of servant leadership, namely listening attentively to others, trying to understand colleagues and being able to empathize with others, being able to create emotional healing, having awareness to understand developing issues, seeing situations from a balanced position, and convincing others. Rather than forcing obedience, visionaries are scrupulous in understanding lessons from the past, current realities, and the possible consequences of decisions for the future, with openness, commitment to growth, and building community [4]. Servant leadership dimensions are altruistic calling, emotional healing, wisdom, persuasive mapping, organizational stewardship, humility, vision, and services [19].

Servant leadership is leadership that starts from a sincere feeling that arises from within the heart to serve, put the needs of followers as a priority, get things done with others, and help others in achieving a common goal [20]. Leaders who implement services at work are serving, considerate, and close to subordinates so that employees who work feel comfortable at work. This feeling of comfort can unconsciously stimulate the emergence of creativity in work [21]. The results of previous research indicate

that IWB can be influenced by charismatic leadership if it is mediated by an ethical climate, further research is needed if it uses other leadership styles and is moderated by other variables [22]. Servant leadership is one of the leadership styles that are currently in demand and is of concern to world-leading experts so it is thought to be a variable that predicts IWB variables.

Knowledge sharing is a willingness to share information, knowledge, data, and authority that is carried out by a teacher toward his co-workers [23]. A teacher will be able to be more innovative in teaching if he gets or has a variety of knowledge and information. This is because the teacher in teaching must at least master the scientific knowledge and information being taught [24]. Mastery of this knowledge is usually obtained from self-study and sharing knowledge with fellow teachers [25]. The information and knowledge obtained from colleagues are usually related to technical explanations in dealing with the obstacles faced by teachers while teaching [26]. Of course, this is very suitable to complement the theoretical knowledge possessed by a teacher sourced from books or formal education. So, teachers who gain knowledge or share knowledge have innovative work behavior.

But not all teachers have the ability or desire to share knowledge. Teachers who feel attached to their profession as teachers in schools are teachers who are believed to be able to share knowledge [27]. Teachers who have a professional attachment to school will try their best to work and empower all their potential so that students will feel the impact of the teacher's enthusiasm. Teachers will try to display positive behavior, have a proactive perspective in understanding work problems through a series of activities that go beyond the existing rules, and aim to give a positive voice to their organization [28].

Teachers will have IWB if they receive more knowledge or share knowledge [15]. Sharing knowledge is part of transforming tacit into explicit knowledge [29]. Knowledge sharing further emphasizes the sharing of both tacit and explicit knowledge at the individual, group, and enterprise levels. Knowledge sharing is an individual who shares relevant information, ideas, and suggestions as well as expertise with others in an organization [30]. Sharing knowledge is the provision of task information and know-how to help others and to collaborate with others to solve problems, develop new ideas, or implement policies or procedures [31]. Individuals who want to share knowledge with others by eliminating fears that may arise or there is an appreciation for the act of sharing.

Sharing knowledge is described as disclosing information, and collaborating with colleagues to solve a given problem [32]. Knowledge sharing can be done through face-to-face communication or written messages or contact with other experts, organizing, documenting, or capturing knowledge for others [33]. A basic model of knowledge sharing consists of the following elements: source, recipient, object to sharing, the process of sharing, and the sharing context [34]. The process of measuring knowledge sharing consists of five types, namely general overviews, specific requirements, analytical techniques, progress reports, and project results [35]. Research on IWB has been widely studied by academics and practitioners. What distinguishes this research from other research is the novel use of exogenous variables which are rarely studied and the use of different data analysis. Therefore, this study examines the direct and indirect effects of servant leadership and knowledge-sharing variables on IWB variables. This aims to determine the effect of servant leadership and knowledge-sharing variables on IWB variables partially and simultaneously, as well as calculate the total contribution of servant leadership and knowledge-sharing variables to IWB variables.

2. RESEARCH METHOD

This research uses path analysis which is managed quantitatively. This research was conducted in several driving schools that adopted the *Merdeka* Learning Curriculum consisting of public schools and private schools in the areas of Jakarta, Bekasi, Bogor Regency, and Bandung Regency, Indonesia. The population in this study were public and private high school teachers who were members of driving schools. The number of samples in this study was 158 driving teachers taken from 202 driving teachers with an error rate of 5% according to Isaac and Michael's calculations [36]. sampling technique using purposive sampling. Data collection using a questionnaire uploaded in the Google Form. To avoid bias in the research, the researchers ensured that the teachers who filled out the questionnaire were teachers whose schools had used the independent curriculum. then looking at the collected data to make sure that the respondents who filled out the Google form did indeed come from schools that were the population of this study.

The research begins with making research instruments and then testing the validity and reliability of 30 respondents. Then distributing questionnaires to a number of respondents. The work behavior innovative variable questionnaire consists of 18 statement items which are then tested for validity using the person correlation formula. The result turned out that there were 5 items whose personal correlation coefficient value was less than 0.363, then it was declared invalid. Then the 13 valid questions were calculated by the reliability test and obtained a reliability coefficient of 0.843 which means very reliable. The servant leadership variable questionnaire consists of 20 statement items which are then tested for validity using the

person correlation formula. The result turned out that there were 6 items whose personal correlation coefficient value was less than 0.363, then it was declared invalid. Then the 14 valid questions were calculated by the reliability test and obtained a reliability coefficient of 0.811 which means very reliable. The knowledge sharing variable questionnaire consists of 18 statement items which are then tested for validity using the person correlation formula. The result turned out that there were 4 items whose personal correlation coefficient value was less than 0.363, then it was declared invalid. Then the 14 valid questions were calculated by the reliability test and obtained a reliability coefficient of 0.877 which means very reliable.

The data analysis technique uses path analysis which is broken down into three calculation structures. The first structure calculates the magnitude of the influence of servant leadership on knowledge sharing. The second structure calculates the magnitude of the influence of servant leadership on IWB and the direct influence of knowledge sharing on IWB. The third structure calculates the amount of direct and indirect influence of servant leadership on innovative work behavior through knowledge sharing. Substructure 1 calculates the magnitude of the direct influence of servant leadership on knowledge sharing with the hypothesis Ha1: There is a significant influence of servant leadership on knowledge sharing presented in Figure 1.
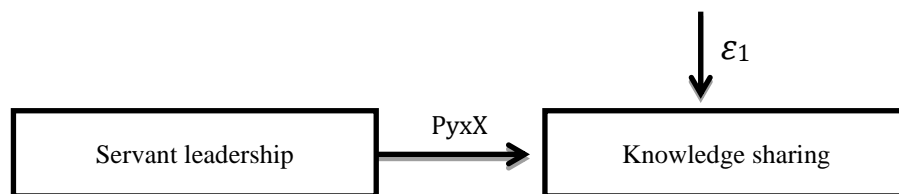

Figure 1. Substructure 1

The research structure model is continued with sub-structure 2 which calculates the magnitude of the partial direct influence of servant leadership on IWB and knowledge sharing on IWB. The research hypothesis for the partial direct influence of servant leadership on IWB is: There is a significant influence of servant leadership on innovative work behavior (H_{a2}). Calculating the magnitude of the partial direct influence of knowledge sharing on IWB, the hypothesis is: There is a significant influence of knowledge sharing on innovative work behavior (H_{a3}). The sub-structure model 2 is presented in Figure 2.
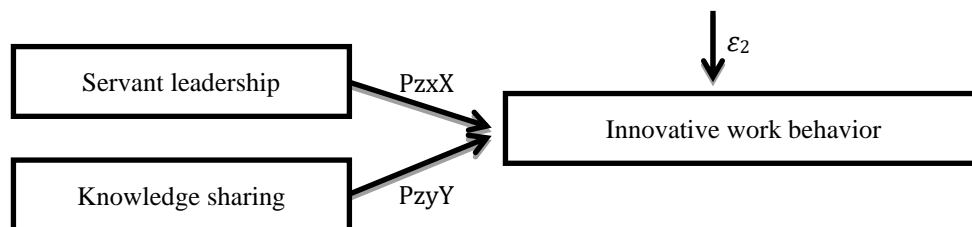

Figure 2. Substructure 2

The final step in the calculation is to create a path analysis structure. The final structure of the path analysis calculates the total contribution of servant leadership's direct and indirect influence on IWB through knowledge sharing. In this final structure the knowledge sharing variable acts as an intervening variable. The path analysis structure is presented in Figure 3.
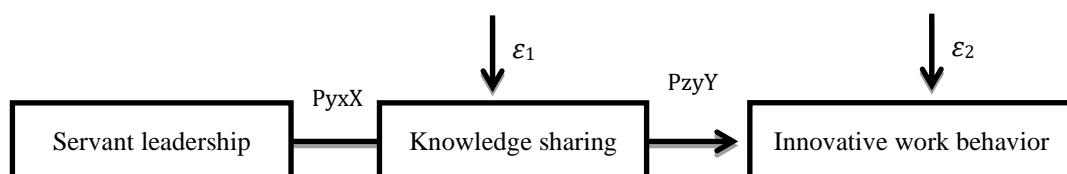

Figure 3. Structure of path analysis

3. RESULTS AND DISCUSSION

3.1. Results

The research results begin with calculating the sub-structure path analysis 1 and 2. The sub-structure path analysis 1 aims to determine the direct influence and contribution of servant leadership to knowledge sharing. Substructure path analysis 2 aims to determine the magnitude of the partial direct influence of servant leadership on IWB and knowledge sharing on IWB. The calculation results are presented in Table 1.

Table 1. Path coefficient of sub structure 1

| Model: KS | Unstandardized coefficients | | Standardized coefficients | t | Sig. |
	B	Std. error	Beta		
1 (Constant)	8.968	2.684		3.342	0.001
Servant leadership	0.623	0.052	0.690	11.917	0.000

Based on Table 1, the servant leadership variable has a significant effect on the knowledge-sharing variable. It is known that the t count is 11.917 with a significance value of 0.000, while the t table is 1.975 with a significance value of 0.050. By the decision-making provisions, if the t count (11.917)>t table (1.975) with a significance value of 0.000<0.050 then the first hypothesis is declared accepted. This reveals that there is a significant influence of servant leadership on knowledge sharing. The magnitude of the contribution of the servant leadership variable to knowledge sharing can be seen in Table 2.

Table 2. Coefficient of determination of sub-structure 1

Model	R	R square	Adjusted R square	Std. The error in the estimate
1	0.690	0.477	0.473	3.260

Based on Table 2, it is known that if the R-value is 0.69, the R Square value is 0.477. This means that the contribution of the servant leadership variable to knowledge sharing is 0.690. Meanwhile, the magnitude of the influence of other variables can be seen from the residual coefficient value ($\varepsilon 1$) of 0.723. The calculation process is as:

$$\varepsilon 1 = \sqrt{(1-R2)}$$
$$= \sqrt{(1-0.477)}$$
$$= \sqrt{0.523}$$
$$= 0.723$$

Based on the results of these calculations, it can be seen that the contribution of servant leadership to knowledge sharing is 0.690 with a residual coefficient of 0.723. The servant leadership contribution of 0.690 means that it has quite a strong influence on knowledge sharing. The residual coefficient is 0.723, meaning that it was not examined in this study. The results of data processing are formulated into a path structure in Figure 4.
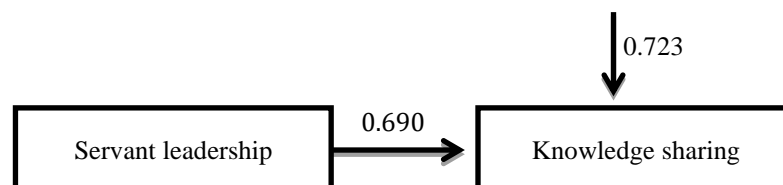

Figure 4. Sub structure 1

The calculation is continued by analyzing sub-structure 2 with the aim of finding out the partial direct influence of servant leadership and knowledge sharing on IWB. The first calculation is the direct influence of servant leadership on IWB. The second calculation is the direct effect of knowledge sharing on IWB. The results are presented in Table 3.

Table 3. Sub-structure path coefficient 2

| Model: IWB | Unstandardized coefficients | | Standardized coefficients | t | Sig. |
	B	Std. Error	Beta		
1 (Constant)	6.562	2.878		2.280	0.024
Servant Leadership	0.450	0.075	0.426	6.008	0.000
Knowledge Sharing	0.482	0.083	0.412	5.811	0.000

Based on Table 3, the t count is 6.008 with a significance value of 0.000, while the t table is 1.975 with a significance value of 0.050. By the decision-making provisions, if the t count (6.008)>t table (1.975) with a significance value of 0.000<0.050 then the second hypothesis is declared accepted. This reveals that there is a significant influence of servant leadership on innovative work behavior. The results of calculating the effect of knowledge sharing on IWB based on Table 3 show that the t count is 5.811 with a significance value of 0.000, while the t table is 1.975 with a significance value of 0.050. By the decision-making provisions, if the t count (5.811)>t table (1.975) with a significance value of 0.000<0.050 then the third hypothesis is declared accepted. This reveals that there is a significant influence of knowledge sharing on innovative work behavior. To see the magnitude of the contribution or path coefficient, the results are presented in Table 4.

Table 4. Coefficient of determination of sub-structure 2

Model	R	R square	Adjusted R square	Std. The error of the estimate
1	0.770	0.593	0.587	3.378

Based on Table 4, it is known that the R-value is 0.770 and the R Square value is 0.593. This means that the contribution of the servant leadership and knowledge-sharing variables together to knowledge sharing is 0.770. Meanwhile, the magnitude of the influence of other variables can be seen from the residual coefficient value ($\varepsilon2$) of 0.638. The calculation process is as:

$$\varepsilon2 = \sqrt{(1-R2)}$$
$$= \sqrt{(1-0.593)}$$
$$= \sqrt{0.407}$$
$$= 0.638$$

Based on the overall calculation of sub-structure 2, it is known that servant leadership has a direct influence of 0.426 on IWB. The knowledge-sharing variable has an influence of 0.412 on IWB. Meanwhile, the residual efficiency was 0.638 which was not examined in this study. The results of data processing illustrate the path structure and influence of the servant leadership and knowledge-sharing variables in Figure 5.
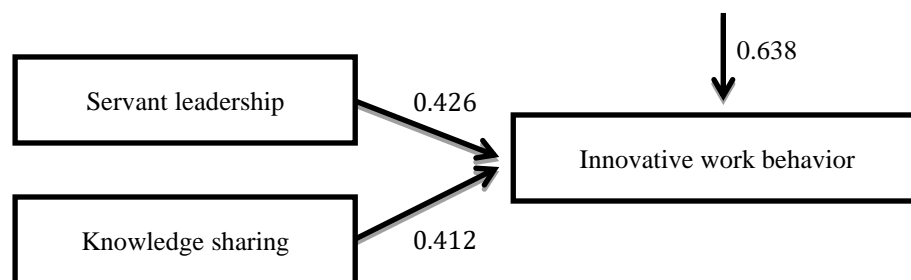

Figure 5. Sub structure 2

The final step of data analysis in this research is to create the final path structure. The final structure prepared is a combination of sub-structures 1 and 2 in the previous calculation process. This final structure answers the magnitude of the indirect influence of servant leadership on IWB through knowledge sharing. The path coefficient results are presented in Figure 6.
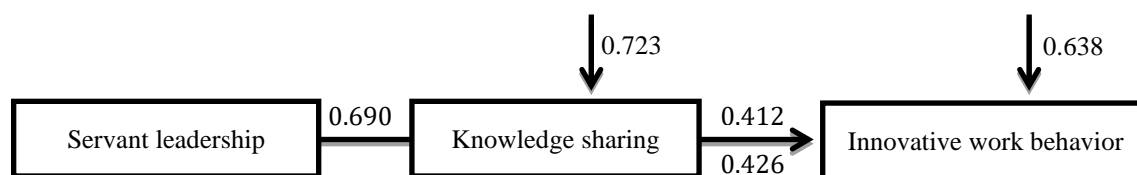
Figure 6. Structure of path analysis

Based on Figure 6, the direct effect of the servant leadership variable on innovative work behavior is 0.426×0.426=0.852. That is, the influence of the servant leadership variable on innovative work behavior is 85.2%. Meanwhile, the indirect effect of the servant leadership variable on innovative work behavior through knowledge sharing is 0.426×0.690×0.412=0.121. That is, the influence of the servant leadership variable on innovative work behavior through knowledge sharing is 12.1%. So, the total direct and indirect influence of the servant leadership variable on innovative work behavior through knowledge sharing is 85.2%+12.1%=97.3%, which is in the very strong category. While 2.7% comes from variables not examined in this study.

3.2. Discussion

Based on the research data processing that has been done, the research results reveal that there is a significant influence of servant leadership on knowledge sharing. The results of this study are in line with the results of the research described by Rodriguez, stated that servant leadership has an influence on knowledge sharing [37]. Knowledge sharing is a dynamic learning process where organizations or companies will continue to develop to innovate or be more creative through existing interactions. Furthermore, Ipe emphasizes the effective utilization of knowledge sharing, because knowledge sharing will continue to grow if it is supported by servant leadership from the right leader [37]. Teachers who use a servant leadership style will encourage colleagues to share knowledge as a part of servant leadership [1]. This will have a wider impact if the principal or senior teacher has a strong servant leadership style. Teachers will imitate the attitude or behavior of the principal and senior teachers to help and share knowledge with other teachers. So that it will create conditions for teachers who always want to share the knowledge and experience they get from the principal, fellow teachers, and education staff [5].

The research results reveal that there is a significant influence of servant leadership on innovative work behavior. The results are in line with the results of previous studies which concluded that there is a significant influence of servant leadership on innovative work behavior [20]. The influence of servant leadership on innovative work behavior is because the concept of servant leadership is centered on members conveying their ideas, creativity, and innovation, to create an innovative work environment. The better the servant leadership entrusted by the leadership to its members, the better the innovative work behavior is shown by the members [14]. Conversely, the worse the servant leadership entrusted by the leadership to its members, the worse the innovative work behavior is shown by the members [37]. Servant leadership always prioritizes service and other people so that it helps others in completing tasks. This results in subordinates feeling helped and comfortable with the services provided by the leader [38]. Comfortable conditions make employees more innovative and creative in carrying out their duties and responsibilities.

Furthermore, the research results reveal that there is a significant effect of knowledge sharing on innovative work behavior. The results of this study are the same as the results of research disclosed by Wijaya which states that knowledge sharing has a significant effect on innovative work behavior [39]. If knowledge sharing is centered on one's knowledge, then it is shared with others who contribute to developing knowledge, innovation, and ultimately organizational competitive advantage [39]. This is what can trigger the development of innovative work behavior. In simple terms, it can be said that if knowledge sharing is implemented in an agency or organization, then employees in the agency or members of that organization will have innovative work behavior [13]. However, if knowledge sharing is not implemented, innovative work behavior will not appear. Teachers who share knowledge will get new ideas and thoughts that can be implemented in the teaching process and other activities at work [33].

4. CONCLUSION

The results of the study show that the variable servant leadership and knowledge sharing partially have a positive and significant effect on IWB. The total direct and indirect contribution of servant leadership variables to innovative work behavior through knowledge sharing is 97.3%. This amount is very large and

has an impact on the development of IWB in schools. The implications of this research can be used by school principals and education policymakers at the national and regional levels to strengthen servant leadership to create knowledge sharing in strengthening the innovative work behavior of teachers in senior high schools.

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