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Green Online Retailer Towards Brand Sustainability

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Abstract

The shift in shopping methods from physical (offline) stores to virtual (online) stores has crystallized even more. Gradually the shift allows consumers to feel easy and comfortable in respect to buying products by online methods. This earliness paradigm shift becomes interesting if it becomes a topic of the research regarding the possibility of its sustainability in the triple bottom line. The clarity of the consumer's perspective on brand sustainability in terms of the main three pillars is being tested to clarify the roots of the paradigm by becoming a hypothesis in this research. The hypothesis was tested using Structural Equation Modeling on the answers of 278 respondents to identify the significant path. The findings are quite surprising so that entrepreneurs require to put forward the sustainability side of their brand. Future research should be aimed at adding more detailed factors related to the need for the process of achieving sustainability.

Kata Kunci:

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Abstrak

Pergeseran metode belanja dari toko fisik (offline) ke toko virtual (online) semakin mengkristal. Lambat laun pergeseran tersebut membuat konsumen merasa mudah dan nyaman dalam membeli produk secara online. Pergeseran paradigma dini ini menjadi menarik jika menjadi topik penelitian mengenai kemungkinan keberlanjutannya di triple bottom line. Kejelasan perspektif konsumen terhadap brand sustainability ditinjau dari tiga pilar utama sedang diuji untuk memperjelas akar paradigma tersebut dengan menjadi hipotesis dalam penelitian ini. Hipotesis diuji dengan menggunakan Structural Equation Modeling pada jawaban 278 responden untuk mengidentifikasi jalur signifikan. Temuan tersebut cukup mengejutkan sehingga pengusaha perlu mengedepankan sisi keberlanjutan merek mereka. Penelitian selanjutnya harus ditujukan untuk menambahkan faktor-faktor yang lebih rinci terkait dengan kebutuhan untuk proses pencapaian keberlanjutan.

Introduction

Sustainability has progressed from a minor environmental concern to a critical component of retail strategy over the years (Charter, 2017). The growing importance of the triple bottom-line concept in corporate performance reporting, retailers are increasingly compelled to disclose the environmental impact of their business operations (Babatunde, 2020). The fast moving consumer goods (FMCG) retailer sector is one of those where the sustainability agenda has gained traction (Stewart & Niero, 2018). The final lop on the supply chain places retailers that influence their procurement, production and consumption significantly (Taghikhah, Voinov, & Shukla, 2019). Retailers' strategic role in raising environmental awareness and encouraging sustainable consumption (Park & Lin, 2020). This is why many retailers are increasingly investing in sustainable projects such as carbon reduction, energy and watersparing, recycling, green buildings and green product promotion (Linstadt et al., 2020).

Retailers who invest in sustainable initiatives and report on them (Gielens, Geyskens, Deleersnyder, & Nohe, 2018). Since the concept of sustainable development is still permeated in the retail sector of the FMCG, the concept 'green atmosphere' was coined in terms of greening retail environments with the aim of creating a green business image (Hendrigan, 2020). In addition to being driven by the need to preserve the natural environment, the attraction of consumers means profit maximization and the creation of competitive edges (Wang, Guo, Liu, Pan, & Yang, 2019). This study examined the effects of the green atmosphere on storage image, storage reliance and green buying behavior against this background.

The implementation of sustainability initiatives in the retail sector of FMCG is a competition practice (Lambin, Kim, Leape, & Lee, 2020). Environmental pressure groups, for example, criticized retailers for utilizing sustainable production as a forage to promote pictures and as a covert tool to market environmental products (Haden Chomphosy et al., 2021). The lack of a standardized, internationally recognized environmental sustainability reporting format is a further concern (Huber & Bassen, 2017). Sustainability metrics such as carbon emissions, waste management, energy use and recycling targets have been subjectively reporting (Tian, Stranks, & You, 2021). Green e-commerce that incorporate green shopping design and interaction between shoppers and the retail staff are the most visible aspects of sustainability at retail level

(Sousa et al., 2021). Although investment in green environments is a noble gesture, cynical investments are often regarded by consumers as misleading (Abbati, 2019).

The rest of this study is organized as follows; the following section discusses the research problem and the study's objectives. Following this are a review of literature on green environment, store picture, store loyalty and green purchasing behaviour. The methodology used for this study is then discussed. The following are the methods of data analysis and the study findings. The study ends by discussing the effects and findings of the research.

1. Perceived of Green E-commerce Image

The use of atmospheric indicators evolved from retailers in practice and is widely applied with respect to services marketing, brand management and sustainable environment (Fiksel, 2017). Kotler's (1973) seminal retail work is credited with the term atmosphere (Tresidder & Deakin, 2019). In retail, Kotler (1973) described the atmosphere as 'an effort to design buying environments to produce emotional effects that increase the likelihood of buying in the buyer' (Razak, Farid Shamsudin, Raja, & Aziz, 2019). The use of atmospheric indicators evolved from retailers in practice and is widely applied with respect to services marketing, brand management and sustainable environment (H. Y. Kim, Lee, Cho, & Jung, 2020). Moreover, there were theoretical developments which sought to extend the atmospheric model concept.

The term green atmosphere refers to the purposeful effort in literature for the design of retail environments which incorporate dimensions of sustainability (Gupta, Dash, & Mishra, 2019). Green atmospheres are in practice a multifaceted concept consisting of a series of environment-friendly stimuli, which can enhance the shopping experience of an individual (Baležentis, Štreimikienė, Jurkėnaitė, & Dabkienė, 2021). The use of green environments shows the company's commitment as part of its operational philosophy to incorporate green marketing principles (Kartawinata et al., n.d.). The main components of the atmosphere that influence consumer behaviour are green ambience, green design, and social service factors (Choi & Kandampully, 2019).

Visual, esthetic and design stimuli that increase shopping value are included in ambience (Lee & Lee, 2019). In addition to increasing shopping, the retail environment offers a calming effect on the consumer's emotional state, which reduces psychological stress when shopping (D. Kim, Hyun, & Park, 2020). From a green atmosphere point of view, the most used green indicators include efficient use of energy, renewable energies

and energy star ratings. Several previous studies have shown that the ambience and the company image have a positive relationship (Famiyeh, Asante-Darko, & Kwarteng, 2018). The role of environmental indicators in strengthening the emotional connection with the retail outlet in particular. It is hypothesized on the basis of the previous discussion:

H1: There is a significant effect between green e-commerce image and green service image.

2. Perceived of Green Service Image

The purchasing process is a social interaction between the consumer and the social environment of the retailer (Lăzăroiu, Neguriță, Grecu, Grecu, & Mitran, 2020). Social factors, also known as social service landscape, include consumer interactions with the service landscape and interactions from consumer to consumer (Helm, Kim, & Van Riper, 2020). Employees at the retail outlet act as a vital social cue that improves consumer shopping and store image assessment overall (Balaji & Maheswari, 2021). Employees should demonstrate their commitment to support the values of sustainability in their daily work as 'directors of first impressions' and 'managers of moments of truth (Xiao, Wilhelm, Vaart, & Donk, 2019). Green service captures the sustainability-oriented service offered to consumers that has the potential to enhance corporate image (Mele, Gomez, & Garay, 2019).

Green service indicators consist of functional and esthetic components that influence the overall assessment of the shop (Phoomirat, Disyatat, Park, Lee, & Dumrongrojwatthana, 2020). Contemporary green service incorporates the so-called biophilic shop service concept for retail greening (Capitanio, 2018). The use of natural environmental indications such as botanical gardens to attract consumers (Karupiah & Bada, 2017). Biophilic environments encourage retail approaches as they provide a relaxing atmosphere for consumers away from the pressing daily routines (Ortegón-Cortázar & Royo-Vela, 2019). Due to the obvious decline of the natural setting and the development trend, biophilic storage concepts will be relevant as they enable consumers to reconnect to the natural setting (Lee & Lee, 2018). It is widely recognized that companies investing in sustainability have good corporate citizenship and a good corporate image. Green atmospherics can increase the green procurement intention, business identity and retail loyalty in terms of buying behaviour (Ahmad & Zhang, 2020). For the atmosphere to work effectively as a marketing tool, consumer satisfaction and

retention needs to be improved. Nevertheless, marketers must realize that, if consumers interpret it, sometimes atmospheric conditions will reduce consumer satisfaction. This realization creates a dilemma for marketers to inform their consumer about their green atmosphere. Based on the foregoing discussion, the following hypotheses were formulated as follows:

H2a: There is a significant effect between green service image and brand sustainability. H2b: The green service image significantly mediates the relationship of green e-commerce image and brand sustainability.

3. Brand Sustainability

Sustainability is defined by the dictionary as 'the way the resource is harvested or used to avoid depletion or permanent damage to the resource.' (Mirza, Richter, van Nes, & Scheffer, 2019) The idea behind what we mean by brand sustainability – actions which can help the organization to increase the marketer's and consumers' value of the brand over time is quite clear. Unfortunately, sustainable means a large and varied range of things as an entrepreneurial term (Mei et al., 2017). To clarify what we mean in the following paragraphs, we talk briefly about sustainability in a business sense. Sustainability began in the academic literature in the 1960s in the business use of the term. This is when organisation's managers realize that their decisions often involve social and environmental issues and could have significant implications for the long-term success of the organization if they are not properly resolved or treated (Domínguez-Escrig, Mallén-Broch, Lapiedra-Alcamí, & Chiva-Gómez, 2018). In the beginning, the company acquired, manipulated and then returned to the different social groups such as employees, communes and even countries the concept, starting with concerns about corporate social responsibility, which developed over time (Visser, Kurakin, & Nikulin, 2019).

As these types of organizational changes were generally costly, the concept of a 'financial payoff' was first published in 1980s literature. This has developed various types of solutions that can be employed by the organization in managing these financial problems. These strategies have often been called 'sustainability business case' approaches and actions (Bergman, Bergman, & Berger, 2017). The sustainable business case was finally defined as a strategic and profit-driven business response to environmental and social issues caused by the primary and secondary activities of the organization (Herath, Herath, & Dunn, 2017).

As new initiatives and concerns arose, a critical word appeared in the literature, altering the corporate perspective on sustainability (Okorie et al., 2018). It was the word 'environment' concerns about the environment in which the organization operated were a natural result of an increasingly industrialized world (Haseeb & Hartani, 2018). Because of various issues such as contamination and leaks, oil spills, nuclear waste, and other corporate initiatives that enraged government regulatory and interest groups, that area had risen to the top of corporate concerns. As a result, until the turn of the century, safety and protection issues were central to sustainability. At that point, the issues of diminishing oil reserves, oceanic pollution, and, most importantly, global warming began to take center stage (Maibach, Sarfaty, Mitchell, & Gould, 2019). This resulted in a completely new perspective on sustainability, one that was centered on 'green' initiatives aimed primarily at conserving what are perceived to be finite resources on the planet (Li, Xu, & Zheng, 2018).

As can be seen, over the last half-century, sustainability has developed and evolved. In this paper, we return to the term's origins, namely that something that is sustainable can grow, evolve, and prosper over time without being destroyed. That is what we propose in this paper for brands and branding. Although brands have been thought to be of 'sustainable' quality, i.e. they grow and evolve over time, there are growing evidence that brands can decrease and fail, like other corporate resources, if not properly managed (Castro & Giraldi, 2018). The methodology proposed has been developed so as to find ways and means to develop, grow and maintain brands.

Brand sustainability is demonstrated by the brand's ability to maintain or improve its marketplace position in comparison to other brands in its category over time (Arrigo, 2018). As a result, the AGR becomes a critical metric in terms of brand sustainability (Duffett, Petroşanu, Negricea, & Edu, 2019). A brand that shows a decline in AGR in its marketplace position or share in our evaluation system is losing its sustainability and may be on a path to complete elimination at some point in the future. Brand sustainability can be defined as the average growth rate (AGR) of brand preference measured over a long period of time (Rosin, Campbell, & Reid, 2017). The measurement period in this study is ten years. While we used summary statistics in this paper, we are perfectly capable of delving deeper into the data and examining brand performance on an annual basis. In this analysis, we argue that brands with a positive (above zero) brand AGR are healthy and clearly capable of maintaining their market position (Ameyibor, Anabila, & Saini, 2021).

Brands with a negative brand AGR are losing their market position and thus their sustainability (Olšanová, Escobar Ríos, Cook, Král, & Zlatić, 2021). This is the type of metric that brand managers will need in the future to properly plan for and allocate finite corporate resources (Halwani, 2020). Interestingly, with the exception of no preference AGR, brand sustainability, as represented by leading brand share AGR, is unrelated to the majority of the variables studied here (Vredenburg, Kapitan, Spry, & Kemper, 2020). This discovery greatly simplifies the analyst's and brand manager's development and analysis of a brand sustainability strategy. Based on the foregoing discussion, the following hypotheses were formulated as follows:

H3: The brand sustainability is significantly influence by green e-commerce image and green service image.

Method

This study uses quantitative methods designed for the collection, analysis and display of data in numeric forms to approach empirical studies so that accurate measuring can be done (Sekaran & Bougie, 2016). In addition, an explanatory approach will be used to identify correlations between several research variables with a series of hypothesis tests to analyze survey data in order to establish the relationship between the studied variables (Leedy & Ormrod, 2015). This study utilize the structural equation modelling (SEM) with the approach of partial least square (PLS). The analysis is supported by the Adanco software in examining the path relationship of between the variables in order to generate the results. Confirmatory Factor Analysis is used in this study to test the measurement model (CFA). The loading factor of each indicator is used to test the validity of the indicators. Meanwhile, the reliability test seeks to determine the consistency of a variable's indicators. Cronbach's alpha greater than 0.70 is considered acceptable. The second stage looks into the variable relationship's structural model. The coefficient of determination (R2) is used to calculate the influence of the exogenous latent variable on the endogenous latent variable. The value of the path coefficient (β) is then used to deduce the pattern of exogenous latent variable effects on the endogenous latent variable (Hair, Hult, Ringle, & Sarstedt, 2017).

A total of 360 consumers aged 18 or over who buy in online retailers have compiled cross-sectional data. The online retailers were selected based on their commitment to environmental sustainability as indicated in retailers' sustainability

reports. The intercept method was employed to collect data with the aid of a self-administered questionnaire. Using this method, shoppers were approached by trained fieldworkers and were requested to participate. No incentives were offered to encourage participation. The intercept method was chosen particularly because it allowed researchers to target relevant consumers. In the absence of a sample frame, non-probability sampling in the form of convenience sampling was used to select respondents. Data were collected during a four-month period and participation was entirely voluntary.

The data collection was carried out using a self-administered structured questionnaire. The survey was divided into four parts. The first section dealt with questions about respondent demographics, such as age, gender, level of education, income and ethnicity. The second section dealt with issues relating to green environments, green design and green social services. A seven-point scale was used to operationalization (Ferradás, Freire, Núñez, & Regueiro, 2020).

Result and Discussion

A total of 360 valid responses were provided for the study. In terms of gender, the majority of respondents (n=218; 61%) were female, with the remainder being male (n=142; 39%). In terms of education, nearly half of the respondents (n = 176; 49 percent) held a matric certificate, followed by diploma holders (n = 126; 35 percent), and those with a degree made up approximately 16 percent (n=58). In terms of age, the majority of respondents (45 percent; n=162) were between the ages of 18 and 25, followed by those between the ages of 26 and 33 (30 percent; n = 108). Respondents aged 33-40 years made up 18 percent (n = 65), while those aged 41 and up made up nearly 7 percent (n = 25).

Tabel 1. Descriptive Statistic, Construct validity and reliablity

| Variable | Mean | AVE | ρΑ | Cr-a |
|----------|--------|-----------------|-----------------|-----------------|
| | | (> 0.5) | (> 0.7) | (> 0.7) |
| GEI | 6.0722 | 0. 5502 | 0.8690 | 0.7133 |
| GSI | 5.9305 | 0.8082 | 0.8814 | 0.8811 |
| BSU | 6.3818 | 0.7876 | 0.8972 | 0.8669 |

AVE : Average variance extracted

ρA : Dijkstra-Henseler's coefficient

 $Cr-\alpha$: The Cronbach's α

All indicators remain valid and reliable. Table 1 shows the descriptive statistic and the measurement result for constructed variables. Means, and standard deviations for the variables are under consideration. Cronbach alpha coefficients show validity with value above 0.7. Average variance extracted and Dijkstra-Henseler's coefficient shows reliability with the value are higher than the requirements respectively (Hair et al., 2017).

The Pearson's product moment coefficient was used to assess the degree of association between the variables that comprised the conceptual framework (r). Green e-commerce or corporate image (r = 0.780; p 0.01) and green service image (r = 0.760; p 0.01) were found to be positively related to green corporate image. Brand sustainability is associated with green e-commerce or corporate image (r = 0.755; p 0.01). The results of the correlation analysis are shown in Table 2.

| | | | <u> </u> | |
|----------|---------|---------|----------|--|
| Variable | GEI | GSI | BSU | |
| GEI | 1.000 | | | |
| GSI | 0.780** | 1.000 | | |
| BSU | 0.760** | 0.755** | 1.000 | |

Table 2. Result of The Correlation Analysis

^{*} Correlation is significant at the 0.05 level (2-tailed).

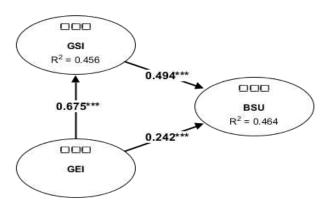


Figure 1. The Adanco software output from the research model

The Adanco output leads to Figure 1, which makes it possible to analyze the value and determining factor of the path that can be immediately indicated. Figure 1 shows the coefficient of determination (R2) of 0,4559 explain the variance of the green service image (GSI) variable indicated by green e-commerce image (GEI) variable at 45,59 percent. Meanwhile, R2 of 0,4643 explain the variance of the brand sustainability (BSU) variable indicated by the green service image and green e-commerce image variable is 46,43 percent (Hair et al., 2017). The result of R2 is also shown at Table 3.

Table 3. Output of Structural Model

| \mathbb{R}^2 | Path | β | Cohen (f ²) |
|----------------|-----------|--------|-------------------------|
| GSI: 0.1062 | GEI – GSI | 0.3258 | 0.1188 |
| BSU: 0.4419 | GSI – BSU | 0.0209 | 0.0007 |
| | GEI – BSU | 0.6577 | 0.6928 |

β : Path Coefficient

Cohen (f²): Effect size

The results of the structural model from Adanco software output show values like Table 3. The results for this model's path coefficient (β) value of the tests are 0.6752 for GEI – GSI, which show the higher green e-commerce image, so that green service image increases by 67,52 percent. The results for this model's path coefficient (β) value of the tests are 0.2417 for GEI – BSU, which show the higher green e-commerce image, so that brand sustainability increases by 24,17 percent. The results for this model's path coefficient (β) value of the tests are 0.4944 for GSI – BSU, which show the higher green service image, so that brand sustainability increases by 49,44 percent. Table 3 also show the Cohen's (f2) value. In this study, the Cohen's (f2) value is shown to indicate the effect size between exogenous variable to endogenous variable. The value of 0.02, 0.15, and 0.35 interpreted as a small, medium, and large effect respectively. Therefore, Cohen's (f2) value of GEI – GSI is 0.8378 between green e-commerce image and green service image explain large effect respectively between them. Cohen's (f2) value of GEI – BSU is 0.0594 between green e-commerce image and brand sustainability explain small effect respectively between them. Cohen's (f2) value of GSI – BSU is 0.2483 between green service image and brand sustainability explain medium effect respectively between them (Hair et al., 2017).

The ADANCO software executed bootstrap of 2999 samples and 5 percent of significant level to confirm the path coefficient (β) between the relationship. This step indicate the significance of the impact between them, as shown in Table IV. The β value between the relationship of word of mouth and value co-creation, has strengthen by the t-value of 6,2995, that confirmed to be higher than 1,96 and the p-value of 0,0000, that confirmed to be lower than 0,05. That indication explain that the word of mouth is significantly influence the value co-creation. The β value between the relationship of word of mouth and sustainability, has strengthen by the t-value of 0,3882, that confirmed

to be lower than 1,96 and the p-value of 0.6979, that confirmed to be higher than 0,05. That indication explain that the word of mouth is not significantly influence the sustainability The β value between the relationship of value co-creation and sustainability, has strengthen by the t-value of 11.2708, that confirmed to be higher than 1,96 and the p-value of 0,0000, that confirmed to be lower than 0,05. That indication explain that the value co-creation is significantly influence the sustainability. The total effect indication of relationship between word of mouth, through value co-creation and toward sustainability, has the total effect of 0.9835 and strengthen by the t-value of 4.2314, that confirmed to be higher than 1,96 and the p-value of 0,0000, that confirmed to be lower than 0,05. This indication explain that the relationship between word of mouth, through value co-creation and toward sustainability has the significance influence between them (Hair et al., 2017). Those above explanation are based on the output result of the Adanco software analysis.

Table 4. Bootstrap Output of Structural Model

| Path | Direct | Indirect | Total | t-value | p-value |
|-------------|--------|----------|--------|------------|------------|
| | effect | effect | effect | (t > 1.96) | (p < 0.05) |
| GEI – GSI | 0.6752 | - | 0.6752 | 26.9088 | 0.0000 |
| GEI – BSU | 0.2417 | - | 0.2417 | 4.6712 | 0.0000 |
| GSI - BSU | 0.4944 | - | 0.4944 | 7.4955 | 0.0000 |
| GEI-GSI-BSU | - | 0.3338 | 0.5756 | 19.3627 | 0.0000 |

β : Path Coefficient

The acceptance of the hypothesis demonstrates the important role of green service image in mediating the green e-commerce image for the sake of strengthening the achievement of brand sustainability. The results of this research therefore suggest that the achievement of brand sustainability of the green product could be sounding by green e-commerce image with the support from green service image among e-commerce and shoppers of e-commerce (online shoppers).

This study investigated the influence of green atmospherics on green corporate image, store loyalty and green purchase behaviour. The following limitations should be considered when interpreting the study's findings: First, the study relied on cross-sectional data to validate the hypotheses. Cross-sectional data limits the researcher's ability to understand changes in consumer behavior over time. Future studies may address this by

employing a longitudinal design, which allows for a larger data set and rigorous verification of variable relationships. Second, because the study's focus was on retailers in Jakarta, the findings cannot be generalised to represent the perceptions of Indonesia consumers. Further research may seek to extend these findings to other retailers and industries, such as the hospitality industry, where the use of green e-commerce is more noticeable. Finally, because the study relied on self-reported responses from a questionnaire survey, the findings are susceptible to inflated responses. In order to gain a thorough understanding of the subject under investigation, future research in this area may employ a mixed method approach that includes a qualitative design.

The study has several implications for the use of green atmospherics in the FMCG retail sector in South Africa. For starters, this research assists marketers in determining the effectiveness of green atmospheres in promoting store image, store loyalty, and green purchase decisions. Second, the negative sentiments associated with the green social service provided by surveyed retailers compel retail managers to strengthen the legitimacy and credibility of their sustainability initiatives. To gain credibility, retailers must dispel the myth that their investments in green atmospheres are motivated solely by a desire to maximize profits. This can be accomplished through open and honest disclosure of sustainability metrics such as carbon emissions, energy consumption, and water conservation, as well as open and honest reporting on sustainability.

It is critical to train employees to deliver messages that are consistent with the green e-commerce image that the company wishes to project. The training may concentrate on embedding a value system that supports the retailer's green image, such as educating employees on how to communicate the environmental benefits of green products in an honest manner. This will go a long way toward dispelling greenwashing claims made by consumers and other interest groups. Finally, investment in green environments is of strategic importance because it saves costs and a good company citizen often results in an improved corporate image. Investment is important, for retailers, it is also important to dissipate consumer awareness that green environments are a marketing instrument that creates competitive advantage. It is important to invest in green environments that improve consumer value in the buying process, in order to increase the loyalty of the store and maintain competitive advantages.

Conclusion

Online retailers are emerging as key stakeholders in promoting environmental sustainability. Thus, this study set out to investigate the influence of green e-commerce or corporate image, green service image and brand sustainability. The study confirmed the significant relationship between green e-commerce or corporate image and green service image. Also confirmed the significant relationship between green service image and brand sustainability. Thus, e-commerce (online retailer) managers need to devote more resources to the development of green ambience as consumers perceive it favorably. The insignificant relationship between green e-commerce or corporate image and brand sustainability is of great importance for retail managers. However the significant mediation effect of green service image in between the relationship of the green e-commerce image and brand sustainability should be seen as very important to implement its activities. This results in online retailers management shall be considered as investing in elements of green that can improve consumers' shopping experience.

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