

Public awareness and concerns relating to the *Protection of Personal Information Act*

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ABSTRACT

Information privacy is becoming a cornerstone issue of the 21st century, mainly because of the explosion of information technology. The main purpose of the current study is to investigate South Africans' awareness of the new Protection of Personal Information Act, 4 of 2013 and also to explore the levels of information privacy concerns that individuals have, as they relate to the principles outlined in the Act. In addition, the study investigates several group differences across the information privacy concern dimensions by means of MANOVA testing. The findings from a convenience sample of adults suggest that data collection, control and unauthorised secondary use are some of the main information privacy concern dimensions. The results could help government and businesses to understand how individuals' concerns relate to the PoPI Act, highlighting the importance of compliance with the new Act.

INTRODUCTION

Information is the most important tradable commodity of the 21st century and, as a result, information privacy has become a cornerstone issue (Dinev & Hart 2004:413). Privacy is universally seen as an individual's basic human right, where the protection of personal information is also seen as an infringement of the right to use information collected by them (Murata & Orito 2008:234; Xie, Teo & Wan 2006:62).

The South African government has recently recognised the importance of privacy protection when the President signed into law the *Protection of Personal Information Act*, 4 of 2013 on 26 November 2013 (hereafter referred to as the PoPI Act) (IQ Business group 2014:34). The purpose of the PoPI Act is to protect individuals' constitutional right to privacy through the way in which personal information is collected, stored, used, disseminated and deleted (Methven 2010:20).

Privacy concerns are a product of an individual's personal view of fairness in the context of information privacy (Malhotra, Kim & Agarwal 2004:337). This relates to the social

exchange theory, which proposes that individuals outweigh the potential benefits and risks of social relationships (Stanton & Stam 2003:172; Luo 2002:111). These social relationships include the relationships between individuals and government or businesses. There is evidence that individuals no longer passively accept the collection of their information – without understanding the purpose for which it is to be collected, as well as the protection thereof (Stanton & Stam 2003:172; Phelps, Nowak & Ferrell 2000:29).

To date, no previous research has investigated privacy concerns, as they relate to the principles outlined in Chapter 3 of the new PoPI Act. The current study will, therefore, focus on the differences between specific groups in terms of the privacy concern dimensions that relate to the PoPI Act. Firstly, respondents' awareness of the PoPI Act will be determined. Next, age group differences, and differences between victims and non-victims of privacy invasion with regard to the privacy concern dimensions, as outlined in the PoPI Act, will also be assessed.

This study contributes to the existing body of knowledge in determining which privacy concern dimensions have the highest level of concern among different groups. The findings can help government, legislators and businesses to understand how individuals' concerns relate to the new PoPI Act.

The article commences with a review of the literature relating to information privacy and the PoPI Act, followed by a discussion of some biographical factors of information privacy concerns. Next, the methodology adopted for the study is described, after which the findings are presented and discussed. Lastly, the article presents the implications and some recommendations for the future.

THE LITERATURE REVIEW

Protection of Personal Information Act, 4 of 2013

The *Protection of Personal Information Act, 4 of 2013* (PoPI Act) was signed by the President of South Africa on 19 November 2013, and became law on 26 November 2013, after various draft versions over many years (South Africa 2013:1). The latest PoPI Act brings South Africa into line with international best practices in the field of privacy. The purpose of the PoPI Act is to protect individuals' constitutional right to privacy (Methven 2010:20). Section 1(2) (a-d) of the PoPI Act encompasses the protection against unlawful collection, retention, circulation, publication and use of individuals' personal information. This section in the Act also makes provision for the safeguarding and processing of personal information; and it does so by providing measures and regulations that must be complied with by corporate bodies and other entities.

Chapter 3 of the PoPI Act contains eight principles for the lawful processing of personal information. These comprise: accountability, process limitation, purpose specification, further processing limitation, information quality, openness and security safeguards (South Africa 2013:15). The first principle, accountability, outlines the commitment of businesses to safeguarding a person's constitutional right to privacy. This principle encompasses the compliance with all other principles; and as such, the current study will investigate the other seven principles, namely: process limitation, purpose specification, further processing limitation, information quality, openness and security safeguards.



The implementation of the PoPI Act will come into effect in stages (IQ Business group, 2014:34). Particular sections commenced on 11 April 2014, which enable the appointment of an information regulator, and the formulation of regulations. While the compliance obligations are not yet effective, this is the first step towards PoPI becoming operative. The information regulator should be appointed; and draft regulations should be published for comments within the near future. The remaining sections will then be enacted and South Africans will have 12 months from the commencement of the remaining sections within which to become PoPI compliant (Pennel 2015).

Individuals' awareness of legislation on the protection of personal information

The extent of literature on the topic of awareness has mainly focused on the knowledge or awareness of privacy policies of businesses, and the privacy concerns related to them. Little research has focused on the awareness of protection of personal information legislation. Even though there is a large body of knowledge relating to information privacy, there are only a few studies that have focused on the awareness of information privacy legislation. The studies that do focus on this subject demonstrate respondents' lack of knowledge and awareness relating to information privacy regulations (O'Keefe & Connolly 2011:5; Dommeyer & Gross 2003:45). Given that most studies indicate a low level of awareness regarding privacy legislation, the same could be expected to be true for South African privacy legislation.

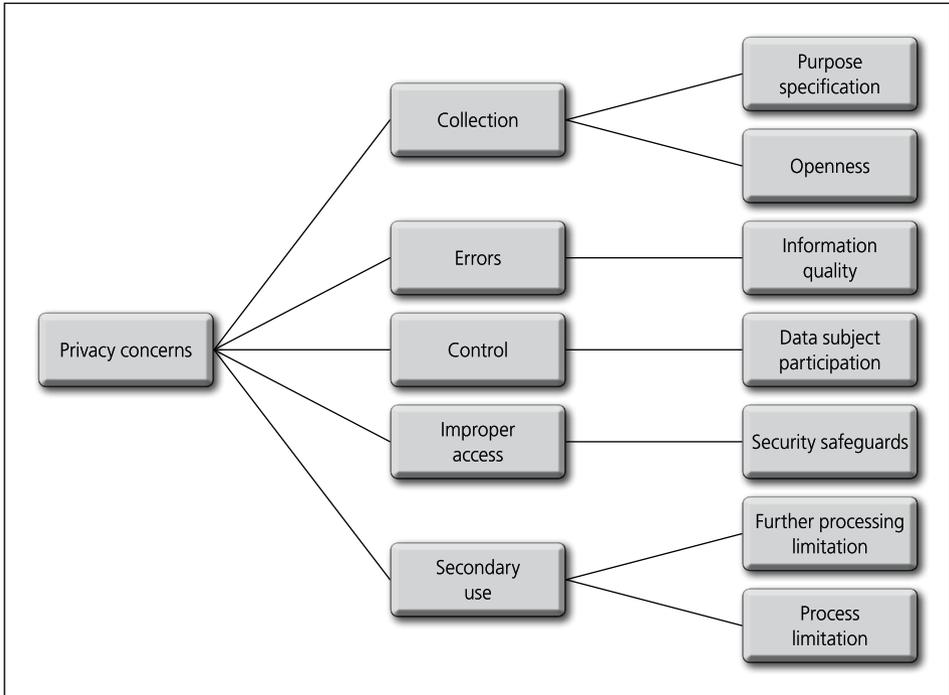
Personal information privacy and the PoPI Act

Privacy may be described in legal terms as the right to be left alone, while more recent definitions include the right to prevent the disclosure of personal information (Kauffman, Lee, Prosch & Steinbart 2011:49; Buchanan, Paine, Joinson & Reips 2007:157). This evokes the social exchange theory, which states that social relationships are based on each partner's motivational investment and anticipated social gain. Thus, exchange may result in both economic and social outcomes (Lambe, Wittmann & Spekman 2008:6; Stanton & Stam 2003:172; Takala & Uusitalo 1996:47). Underlying any definition of information privacy, there is an implicit understanding that the individual's interests are balanced with those of society at large. Individuals surrender a measure of privacy in exchange for some economic or social benefit (Culnan 1993:10).

It is important to realise that there can be no transaction or exchange without the flow of information. The information does not need to be complete, or even accurate, but at the very least, the two parties must acknowledge each other's existence. They must also have some idea of what will be exchanged, as well as what the respective benefits and costs may be (Yudelson 1999:63).

Several information privacy dimensions have been identified over the years (Wu *et al.* 2012b; Culnan 2000; Campbell 1997; Smith, Milberg & Burke 1996). The dimensions most frequently mentioned are collection, unauthorised secondary use, improper access and errors (Wu, Prybutok, Koh & Hanus 2012b; Culnan 2000; Campbell 1997; Smith *et al.* 1996; Culnan 1993). In a South African context, four specific dimensions of privacy were

Figure 1 Link between privacy concerns and the PoPI Act principles



identified, namely: privacy protection, information misuse, solicitation and government protection (Jordaan 2003).

For the purposes of this study, the dimensions of privacy concern that can be associated with the principles outlined in Chapter 3 of the PoPI Act will be used, namely: collection, unauthorised secondary use, improper access, errors and control. Figure 1 illustrates the link between the privacy concern dimensions from previous studies and the principles of the new PoPI Act (far right side of the diagram). The main privacy concern dimensions will be discussed below.

Collection of personal information

The principles conveyed through the PoPI Act to regulate the collection of consumers’ personal information are *purpose specification* and *openness*. Section 3(13)(1) of the PoPI Act states that *purpose specification* specifies that personal information must be collected for a specific, clearly defined and lawful purpose related to an activity of the responsible party (a public or private body or any other person who determines the purpose or means of personal information processing) (South Africa 2015:30). Section 3(17–18) of the PoPI Act states that *openness* requires businesses to be transparent and clear when collecting personal information (South Africa 2015:5). The findings from a study by Smith *et al.* (1996:188) reveal that individuals were less concerned about collection in relation to other privacy concern dimensions. Individuals who were concerned about the collection believed that there should be limits placed on the amount of information government and businesses are allowed to collect (Phelps *et al.* 2000:37–38).

Errors in personal information

The principle conveyed through the PoPI Act to regulate errors in the consumers' personal information is defined as *information quality*. This principle in Section 3(16) of PoPI Act outlines the obligation of businesses to ensure that reasonable steps are taken, and to guarantee that personal information collected is complete, correct and unambiguous (South Africa 2015:35). Errors made with regard to personal information in the context of privacy may be defined as the concern that personal information might become corrupted and invalid – due to careless modifications (Wu *et al.* 2012b:423; Smith *et al.* 1996:172). Many individuals are of the opinion that businesses need to take more steps in minimizing these errors (Milberg, Smith & Burke 2000:39).

Control of personal information

The principle conveyed through the PoPI Act to regulate the control of consumers in the information privacy process is called *data subject participation*. Section 3(23) (1a-b) of the PoPI Act states that this requires that businesses allow consumers to request the modification or removal of personal information, which may be incorrect, deceptive or outdated (South Africa 2015:15). Some researchers believe that a consumer's need for control is more related to the misuse rather than the actual use of personal information (Tsarenko & Tojib 2009:469). Research findings show that the removal of personal information plays a key role in information control; and individuals with higher concerns would be more likely to make use of this principle (Tsarenko & Tojib 2009:469; Phelps *et al.* 2000:37–38).

Improper access of personal information

The principle conveyed through the PoPI Act to regulate improper access of consumers' personal information is *security safeguard* as outlined in Section 3(19) of the PoPI Act. It states that all personal information should be protected against the risk of loss, disclosure, unauthorised access, interference, modification, or damage (South Africa 2015:5). Phelps *et al.* (2000:37–38) found that highly concerned individuals were more likely to deem it wrong for businesses to provide personal information about them to other businesses. Improper access, together with unauthorised secondary use, has been found to have some of the highest levels of concern in previous studies (Golbeck & Mauriello 2014:1; Campbell 1997:51; Smith *et al.* 1996:188).

Unauthorised secondary use of personal information

The principles conveyed through the PoPI Act to regulate the unauthorised secondary use of consumers' personal information are called *process limitation* and *further processing limitation*. Section 3(9–12) of the PoPI Act states that *process limitation* requires that information may only be used or processed, when the purpose or processing is acceptable, applicable and not excessive (South Africa 2015:25). Section 3(15) of the PoPI Act states *further process limitation* requires that the purpose of further processing must be compatible with the original purpose (South Africa 2015:35). The secondary use of information, without the individual's consent, can be seen as a violation of privacy (Culnan 1993:341; Phelps *et al.* 2000). Several researchers discovered that the highest levels of concern were associated with unauthorised secondary use (Campbell 1997:51; Smith *et al.* 1996:188).

Biographical differences with regard to information privacy concerns

Researchers have identified various biographical factors that can play a role in privacy concerns. These include age, as well as previous experiences with privacy invasion (Zhang, Chen & Lee 2013:37; Wu, Huang, Yen & Popova 2012a:891; Buchanan *et al.* 2007:159; Dolnicar & Jordaan 2007:43; Milberg *et al.* 2000:39–40).

With regard to age, several researchers found that older people show more concern for information privacy than younger people (Zhang *et al.*, 2013: 37; Jordaan 2003:268; Campbell 1997:51–52; Nowak & Phelps 1992:36).

With regard to an individual's knowledge acquired from past experiences, there is evidence that personal negative experiences in terms of misuse of information by specific companies are likely to increase all aspects of consumer privacy concerns (Campbell 1997:51; Harris Interactive and Westin 2000:5). This is because such experiences undermine consumers' trust—not only in the particular company involved, but in all organisations. The findings of a study by Campbell (1997:51) indicate that there was a significant positive correlation between direct negative personal experiences and consumer concerns about personal information collection.

PROBLEM STATEMENT AND RESEARCH OBJECTIVES

The recent introduction of the *Protection of Personal Information Act* puts South Africa in line with international privacy laws (Methven 2010:20). This new legislation will soon make it imperative for businesses to process personal customer information, in such a way that they are in compliance with the new law (IQ Business group 2014:34). Against this backdrop, there is a need to investigate information privacy concerns as they relate to the principles outlined in Chapter 3 of the PoPI Act. Also, to date, no previous research has investigated privacy concerns, as they relate to the principles outlined in the PoPI Act.

The primary objective of the study is to examine group differences in terms of information privacy concern dimensions that relate to the PoPI Act.

The secondary objectives of the study are to:

- determine the awareness South Africans have regarding the PoPI Act;
- identify which principles of the PoPI Act South Africans are most concerned about;
- measure information privacy concern levels across five dimensions; and
- determine whether significant differences exist among different age, awareness and victim status respondents across five information privacy concern dimensions, namely collection, control, errors, improper access and unauthorised secondary access.

Three hypotheses were formulated to address the research objectives.

H₁: There is a significant difference between those respondents that are aware of the PoPI Act and those respondents who are not aware of the PoPI Act with regard to their level of information privacy concern across five dimensions (collection, control, errors, improper access, and unauthorised secondary use).

H₂: There is a significant difference between young and old respondents with regard to their level of information privacy concern across five dimensions (collection, control, errors, improper access, and unauthorised secondary use).



H₃: There is a significant difference between those respondents who have been victims of invasions of privacy and those respondents who have not been victims of invasions of privacy in terms of their privacy concerns across five dimensions (collection, control, errors, improper access, and unauthorised secondary use).

THE RESEARCH METHOD

Sampling and data collection

The target population for the current study consisted of South African adult consumers residing in selected suburbs of Pretoria (Centurion, Hatfield, Garsfontein, Lynnwood, Acacia, Menlo Park, Woodlands, Olympus, Faerie Glen, Waterkloof and Brooklyn). For the purposes of the current study, adults are defined as individuals aged 18 to 75 years. The adult population was deemed appropriate because the PoPI Act affects all people in South Africa in their everyday dealings with businesses. Parents at selected schools, as well as students at the main campus of one of the universities in Pretoria, were recruited with the unit of analysis being individuals.

The current study used non-probability sampling as the researchers did not have access to a specific sampling frame from which to draw a probability sample. The data for the main study were collected over a two-month period during July and August 2014 by way of a self-completion questionnaire distributed at school-parking areas, and on the main campus of a University in Pretoria. A total of 300 usable questionnaires were received.

Measures

To measure information privacy concern, the relevant sub-constructs, as they relate to the PoPI Act, were adopted from the Internet Users' Information Privacy Concern (IUIPC) measurement scale (Malhotra *et al.* 2004:351).

The awareness of the PoPI Act was measured via a dichotomous question: Are you aware of the content of the *Protection of Personal Information Act*, 4 of 2013 (PoPI Act)? The victims of privacy invasion were also measured with a dichotomous question: Have you ever personally been a victim of a situation you felt was an invasion of your private information? Age was measured by asking the respondents to indicate their year of birth.

The data analysis

The data were captured in MS Excel and imported into SPSS Version 21 for Windows. One-way between-groups multivariate analyses of the variances (MANOVAs) were performed to test the three hypotheses. Before executing the MANOVA for each hypothesis, assumption testing was conducted to assess normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices and multi-collinearity. Because five separate analyses (for the five information privacy concern dimensions) were conducted, a Bonferroni adjustment was used to reduce the chance of a Type I error (Pallant 2013:305). The significance level for the hypotheses testing, before any adjustments, was set at five per cent ($\alpha=0.05$).

Cronbach's alpha was used to determine the internal consistency reliability. The validity of the information privacy concern scale was assessed by means of confirmatory factor analysis by using AMOS Version 23 software.

THE RESULTS

Descriptive statistics

In terms of the sample, the largest age group (36%) falls within the 21–30 years group, with the second largest group (27%) aged 20 years and younger. For the purpose of the study, and testing Hypothesis 2, the respondents were grouped, according to the older respondents (25 years and above) and younger respondents (below 25 years). The age spread was 49% young respondents and 51% older respondents. Gender representation comprised 56% females and 44% males.

The results regarding the awareness that South Africans have of the PoPI Act indicates that only 29% (86 respondents) were aware of the PoPI Act. It is worth noting that 57% of the respondents reported that they had personally been a victim of a situation that they felt was an invasion of their private information.

Before hypothesis testing could commence, the reliability and validity of the privacy concern scale had to be determined. The internal consistency reliabilities of the sub-constructs of the privacy concern scale were as follow: 0.62 (unauthorised secondary use), 0.65 (control), 0.70 (improper access), 0.81 (collection) and 0.83 (errors). According to the guidelines provided by Malhotra (2007:285), the sub-constructs showed acceptable levels of internal consistency reliability.

The fit indices of the confirmatory factor analysis (CFA) were above the suggested cut-off points associated with each fit index, as suggested by Hair, Black, Babin, Anderson and Tatham (2010:664): the goodness-of-fit chi square value ($\chi^2/df = 2.75$), the comparative fit index (0.94), the Tucker Lewis index (0.91) and the incremental fit index (0.95). The results indicate that the information privacy concern scales fit the data collected from the sample.

HYPOTHESIS TESTS

Hypothesis 1

For the first hypothesis (H_1), a one-way between-groups multivariate analysis of variance was performed to investigate the PoPI Act awareness differences (independent variable) across the privacy concern dimensions (dependent variables). The preliminary assumption testing did not reveal any serious violations from normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multi-collinearity.

The results of the MANOVA uncovered a statistically significant difference between those respondents who were aware and those who were not aware of the PoPI Act in terms of overall privacy concern, $F(5, 293) = 3.54$, $p = 0.004$; Wilks' Lambda = 0.94; partial eta squared = 0.06. However, when inspecting the between-subject effects, no statistical significant differences were present when applying a Bonferroni adjusted alpha level of 0.01.



H_1 is therefore rejected, since there are no significant differences between those respondents who are aware, and those who are not aware of the PoPI Act with regard to their privacy concern across five privacy concern dimensions.

Hypothesis 2

As with Hypothesis 1, the preliminary assumption testing did not indicate any serious violations for Hypothesis 2. The results of the MANOVA showed a statistically significant difference between those respondents who were younger than 25 years of age and those who were 25 years and older on the combined dependent variables, $F(5, 294) = 5.75$, $p < 0.000$; Wilks' Lambda = 0.91; partial eta squared = 0.09.

When the results for the dependent variables were considered separately (between-subject effects), using a Bonferroni adjusted alpha level of 0.01, three statistically significant differences were present: *collection*, $F(1, 298) = 18.75$, $p < 0.000$, partial eta squared = 0.06; *control*, $F(1, 298) = 13.42$, $p < 0.000$, partial eta squared = 0.04; and *unauthorised secondary use*, $F(1, 298) = 15.78$, $p < 0.000$, partial eta squared = 0.05. An inspection of the mean scores indicated that the older respondents reported slightly higher levels of privacy concern than the younger age group for all three dependent variables.

There is thus support for H_2 indicating that older respondents have a higher level of privacy concern than younger respondents with respect to collection, control and unauthorised secondary use.

Hypothesis 3

The third hypothesis (H_3) focused on determining whether privacy victims have a higher level of privacy concern than non-victims. Again, no serious violations of the MANOVA assumptions were uncovered, and the Bonferroni adjustment was made. The results of the MANOVA showed a statistically significant difference between those respondents who had been victims of privacy invasions and those who had not been victims of privacy invasion on the combined dependent variables, $F(5, 292) = 8.67$, $p < 0.000$; Wilks' Lambda = 0.87, partial eta squared = 0.13.

With regard to the between-subject effects, three statistically significant differences were present: *collection*, $F(1, 296) = 28.53$, $p < 0.000$, partial eta squared = 0.09, *control*, $F(1, 296) = 17.19$, $p < 0.000$, partial eta squared = 0.06, and *unauthorised secondary use*, $F(1, 296) = 27.59$, $p < 0.000$, partial eta squared = 0.09. An inspection of the mean scores indicated that the victims of privacy invasion reported slightly higher levels of privacy concern than the reported non-victims of privacy invasion for all three dependent variables.

There is thus support for H_3 indicating thereby that privacy victims have a higher level of privacy concern than younger respondents with respect to collection, control, and unauthorised secondary use.

DISCUSSION, LIMITATIONS AND RECOMMENDATIONS

The main purpose of the current study was to investigate South African consumers' awareness of the PoPI Act, and also to explore the level of privacy concern consumers have as they relate

to the principles outlined in Chapter 3 of the PoPI Act. In addition, the current study aimed to investigate awareness, age group and victim status differences with regard to information privacy concern. The study intended to bridge the knowledge gap of personal information privacy concerns in the South African context related to the pending implementation of the PoPI Act.

Overall, the current study suggests that personal information privacy is an important matter amongst South Africans. However, when it comes to the PoPI Act, the majority (71%) of South Africans are not aware of this Act. This could be due to the fact that the PoPI Act has not yet been promulgated, and it is still pending implementation. O'Keefe and Connolly (2011:5) and Dommeyer and Gross (2003:45) also found, in the United States of America and Australia respectively, that individuals lacked knowledge and awareness relating to their country's privacy regulations. The low level of awareness amongst individuals may give businesses a reduced or delayed urgency in terms of compliance. However, once all the sections are enacted, businesses will have 12 months from the commencement of the remaining sections during which they must become PoPI compliant (Pennel 2015).

Another finding of the current study is that older respondents have higher personal information privacy concerns than do younger respondents. Previous research studies support this finding – that older people are more concerned about their personal information privacy concerns (Jordaan 2003:268; Campbell 1997:51–52; Nowak & Phelps 1992:36). In addition, older respondents, as well as those who report having been victims in the past, were mostly concerned about purpose specification and openness (data collection), data subject participation (control) and processing and process limitation (unauthorised access). This means that in terms of data collection, personal information must be collected for a specific, explicitly defined and lawful purpose related to a function or activity of the responsible party, and the personal information must be processed lawfully and in a reasonable manner (South Africa 2015). The majority of respondents (57%) reported that they had personally been a victim of a situation that they felt was an invasion of their private information.

The current study has certain limitations that should be taken into account. Non-probability sampling was utilised in the current study, and therefore, the results cannot be generalised to the South African population in its entirety. The study was also cross-sectional in nature. Thus, it was not able to track the privacy concerns over time, and therefore, the possible impact of the PoPI Act could not be assessed. It is recommended that a similar study be conducted once the PoPI Act has been promulgated and taken effect in terms of compliance. It may also be worthwhile for future studies to consider measuring the antecedents of information privacy concerns – in an attempt to understand what drives this multi-dimensional construct.

Personal information privacy is a cornerstone issue in today's marketing practices. Chapter 3 of the PoPI Act, in its entirety, outlines the commitment of businesses to safeguarding a person's constitutional right to privacy. However, government and businesses must also assist consumers to understand that the data collected have the potential to build a relationship from which they could participate in the creation of goods or services. In doing this, privacy concerns might be lessened by a desire to participate in this relationship.

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