

Acculturation Alchemy: How Miscitations Make Biculturalism Appear Beneficial

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Contrary to the long-established, well-known, and widely-taught proscription against double-barrelled questions in psychometrics, the field of acculturation has promoted their use. Even journal editors and textbook authors have recommended double-barrelled questions. Rudmin's most recent paper focuses on ideological biases that have distorted acculturation research.

Acculturation refers to the psychological, social and cultural reactions that individuals and groups experience when they have continuous contact with a different culture. For example, immigrants and aboriginal minorities are under pressures to culturally conform to the majority, and even exchange students and other sojourners may experience acculturative stress or "culture shock". Rudmin (2003a; b) has outlined the history of acculturation, beginning with Plato's *Laws* and has tabulated over 100 theories of acculturation between 1918 and 2003. Rudmin (2003b) identified systematic failings in acculturation research, including failure to link psychological research to legal scholarship on acculturation, failure to cite prior research, failure to correctly test claims that one kind of acculturation is less stressful than others, failure to compete theories against opposing theories, failure to

maintain common terminology, failure to heed warnings about difficulties in acculturation research, and failure to understand the logic of the theories. In general, acculturation research does not have a good record.

Rudmin's (2006) most recent paper focuses on ideological biases that have distorted acculturation research. Another paper in process focuses on the wide-spread use of double-barrelled questions to be used in measurement scales. If positive and negative attitudes towards the heritage minority culture are coded as +M and -M, respectively, and if positive and negative attitudes towards the dominant majority culture are code as +D and -D, respectively, then Assimilation (-M,+D), Separation (+M,-D), Integration (+M,+D), and Marginalization (-M,-D) can be defined as four types of acculturation.

Scales for each of these types of acculturation are often comprised of Likert items that ask about both

cultures in one question. Example items for Swedish migrants to Norway might ask for agreement to:

Integration: "I like Swedish food, and I like Norwegian food."

Assimilation: "I dislike Swedish food, but I like Norwegian food."

Separation: "I like Swedish food, but I dislike Norwegian food."

Marginalization: "I dislike Swedish food, and I dislike Norwegian food."

Contrary to the long-established, well-known, and widely-taught proscription against double-barrelled questions in psychometrics, the field of acculturation has promoted their use. Even journal editors and textbook authors have recommended double-barrelled questions (Rudmin, 2006).

The purpose of the present paper is to display the way scholars of high repute, often writing in the best

psychological journals, have been systematically misciting a 1987 review paper. The general line of evidence is that a 1976 study of 9 samples found that Assimilation was much less stressful than was Integration at the community level. But the report of mean correlations for the 9 samples showed Integration and Assimilation to have similar, non-significant, negative correlations with stress. This was re-reported in a 1987 review paper, along with factor results from another study, that also found Integration and Assimilation to be similar in having no relationship to stress. That finding has been, and continues to be, widely miscited as showing that Integration causes less stress than Assimilation. Based on this kind of alchemy, many psychologists advocate that public policy should promote bicultural Integration and should not promote Assimilation.

The paper entitled, "Comparative Studies of Acculturative Stress," was published in *International Migration Review* in 1987 by Berry, Kim, Minde and Mok. It is currently available full-text in most academic libraries via the JSTOR archive. The review covered 19 empirical studies conducted in Canada. Of these, only 11 samples had made measures of acculturation attitudes:

9 samples were Native Canadian communities reported in Berry (1976); 1 sample was Natives from Mistassini, referenced as coming from Berry (1976) but does not appear there; and 1 sample was Korean immigrants reported in Kim's 1984 MA thesis. The section of the 1987 review reporting on the correlations of acculturation attitudes and stress was relatively brief:

"Within samples of Native peoples, acculturation attitudes and stress were both measured and there is a fairly consistent pattern: for all Native samples, those favoring Integration (the mid-path between Assimilation and with attendant culture loss, and Separation with resistance to further contact) experience less stress (mean $r = -.19$), while those preferring Separation tend to experience greater stress (mean $r = +.23$); in all but two samples (both Tsimshian, where acculturation has proceeded the furthest, and Assimilation attitudes are most positive) there is a negative correlation between a preference for Assimilation and stress (mean $r = -.18$). Within the Korean sample Separation, Marginalization and stress loaded positively on the same factor (with factor loadings of $+.70$, $+.67$, $+.40$, respectively)" (Berry, Kim, Minde & Mok, 1987, p. 505).

This 1987 review cautioned in its closing paragraph that these studies

"cannot provide a basis for generalizations to other host or larger societies" because they were all conducted in a single country, Canada (Berry et al., 1987, p. 509).

Thus, readers of the 1987 review by Berry et al. should conclude:

1) For Native Canadians, Integration and Assimilation attitudes were similar in showing low negative correlations with stress, $r = -.19$ and $r = -.18$ respectively.

2) For Korean-Canadians, Integration and Assimilation attitudes were again similar, this time in being uncorrelated with stress, as shown by their loading together in a factor orthogonal to the stress factor.

3) For Korean-Canadians, Separation and Marginalization attitudes were similar in having positive relationships with stress, as shown by their similar factor loadings, $+.70$ and $+.67$ respectively.

4) These conclusions should not be generalized.

However, if readers were to seek further information about the data reviewed in Berry et al. (1987) by checking into the sources of the data, then these modest conclusions become even weaker. For example, as shown in Table 1, the mean correlations for the 9 Native communities are based on samples ranging from $N=31$ to $N=61$,

SAMPLE	N	ACCU LT. STRESS	ACCU LT. INDEX	CORRELATIONS OF STRESS WITH			
				ASSIM.	INTEG.	SEPAR.	MARG.
Aroland	39	3.94	+0.34	-.08	-.27	+.09	----
Hartley Bay (T)	56	4.07	+0.74	+.14	> -.29 *	+.06	----
Sioux Lookout	31	5.07	+1.48	-.08	-.15	+.26	----
Port Simpson (T)	59	5.08	+1.42	+.05	-.15	< +.23	----
Fort St. James	61	5.20	+0.95	-.36 *	-.02	< +.43 *	----
Tachie	60	5.71	+0.47	-.06	-.33 *	< +.46 *	----
Longlac	37	6.00	+0.80	-.19	-.19	+.09	----
Wemindji	61	6.43	-0.69	-.08	-.05	+.26 *	----
Mistassini	70	6.81	----	----	----	----	----
Chisasibi	60	7.03	+0.26	-.52 *	< -.03	+.05	----
<u>Summary Analyses:</u>							
MEAN	52			-.18	-.19	< +.23	----
POOLED	453			-.24 *	-.17 *	< +.28 *	----
COMMUNITY	9			-.84 *	< +.75 *	+.54	----

Table 1: Correlations of stress and acculturation attitudes for the 10 samples reviewed in Berry, Kim, Minde & Mok (1987, p. 499), referring to the original data in Berry (1976, pp. 106-107, 128, 192). Statistical significance ($p < .05$) is indicated by asterisks * and significant differences between correlations are indicated by directional signs > and <. Samples are ordered from least stressed to most stressed, showing the correlation of stress with the Acculturation Index (education, wage employment, urban residence) to be $r = -.41$. The two Tsimshian communities are marked by (T).

with a mean of $N=52$ (Berry, 1976, pp. 106-107). For such small samples, the correlation of stress with Integration ($r = -.19$) was not significantly different from the correlation of stress with Assimilation ($r = -.18$), and neither was significantly different from $r = 0.00$. The correlation of stress with Separation ($r = +.23$) was also not significantly different from $r = 0.00$, but was significantly different from the two negative correlations for Integration and Assimilation. In sum, the Native Canadian data reviewed in Berry et al. (1987) showed that Integration and Assimilation were identical in having no effects on stress, but both were less stressful than Separation.

The correlations of attitudes and stress for each of the nine Native communities are shown in Table 1 on the right side. Integration is significantly less stressful than Separation for three of the nine samples, but Integration is indistinguishable from Separation for six of the nine samples. Integration is significantly less stressful than Assimilation for one sample, but is significantly more stressful in another sample. There is no pattern of correlations showing Integration to be the least stressful mode of acculturation. As shown in Table 1 on the far right, Marginalization attitudes had not been measured for any of the Native samples because "common sense and pilot work indicated that such an outcome was not chosen by anyone" (Berry, 1976, p. 180).

The reasoning in the opening quotation about the two Tsimishan communities (Hartley Bay and Port Simpson) was not clear. As shown in Berry (1976, pp. 129, 182), the three communities with the highest mean Assimilation scores were Hartley Bay (+1.88), Sioux Lookout (+0.97), and Longlac (+0.92), and the three communities which had proceeded the furthest in acculturation, as measured by the Acculturation Index, were Sioux Lookout (+1.48), Port Simpson (+1.42) and Fort St. James (+0.95). The Acculturation Index was a composite measure of Western education, wage employment, and urbanization. There

is no evident relationship between Assimilation attitudes, the Acculturation Index, and stress for the two Tsimishan communities. The reported correlation of Assimilation and stress of $r = -.18$ is the mean correlation for all nine Native samples reported in Berry (1976, p. 183), as shown in the summary analyses at the bottom of Table 1.

Table 1 also includes two types of summary correlations reported in Berry (1976, p. 192) but omitted from the 1987 review by Berry et al. As shown in the summary analyses at the bottom of Table 1, when the data from all nine Native samples were pooled, then Integration was negatively correlated with stress ($r = -.17$, $n = 453$, $p < .05$) but Assimilation was slightly better ($r = -.24$, $n = 453$, $p < .05$). However, when each community's median scores for acculturation attitudes and stress were examined, then Assimilation was shown to be strongly correlated with low stress ($r = -.84$, $n = 9$, $p < .05$), while Integration was shown to be strongly correlated with high stress ($r = +.75$, $n = 9$, $p < .05$). These correlations are in opposite directions and are significantly different ($p < .05$). Thus, a better accounting of the data from the Native samples reviewed in Berry et al. (1987) would have concluded that Assimilation is the best acculturation strategy at the community level, which is the level at which policies are set.

The Korean-Canadian data came from Kim's MA thesis (1984, pp. 75-82) which had reported regression results showing that Integration, Assimilation, Rejection (now called Separation), and Deculturation (now called Marginalization) were each unrelated to psychosomatic stress after controlling for confounding variables such as language use, migration details, socio-economic status, friendships, and identity. This aspect of these data was unreported by the Berry et al. (1987) review. Reported was the factor analysis showing that Integration and Assimilation loaded in the first-factor, orthogonal to the second-factor comprised of stress, Rejection, and Deculturation.

Kim's (1984, p. 124) thesis

analysis also reported Deculturation to be positively correlated with the psychological half of the stress measure ($r = +.40$, $n = 150$, $p < .05$) but unrelated with the somatic half of the stress measure ($r = +.05$, $n = 150$, $p > .05$). However, Deculturation in these data was not being measured as a negative attitude towards two cultures (Rudmin, 2003b; 2006). Prior to Kim's 1984 study, the Deculturation (Marginalization) construct had not been operationalized because it was thought to be "inherently contradictory" for minorities to choose their own demise (Berry, Evans & Rawlinson, 1972, p. 29), such that "attitude items suitable for the 'deculturation' response are almost never accepted in a population; thus no scale has been developed to assess it" (Berry et al., 1977, p. 132). As explained in a footnote in a 1989 article that also reported the Kim (1984) study, Deculturation had been relabeled to be Marginalization and "was approximated by the scale of Marginality constructed by Mann (1958)" (Berry, Kim, Power, Young & Bujaki, 1989, p. 187). Two example marginalization items are shown here demonstrating that the items had been operationalized as social distress, not operationalized as negative attitudes toward two cultures (Kim, 1984, pp.157-167; Berry et al., 1989, p.193):

1) *These days it's hard to find someone you can really relate to and share your inner feelings and thoughts.*

2) *Politicians use national pride to exploit and to deceive the public.*

Hence, the positive relationship reported between Marginalization and stress is not a discovery that dislike to two cultures causes distress, but is evidence of convergent validity for two measures of maladaptation (Rudmin, 2003; 2005). Note that Kim (2004) has subsequently advised against continued use of double-barreled acculturation items, including those employed to measure Marginalization.

Thus, a careful evaluation of the 1987 review by Berry et al. shows that:

1) It cannot conclude that Integration is related to stress,

2) It cannot conclude that Integration is less stressful than Assimilation,

Table 2: Miscitations of Berry et al. (1987). Arranged chronologically.

- Phinney (1990, p. 509):
 "There is some evidence that the acculturated or integrated option may be the most satisfactory and the marginal, the least (Berry et al., 1987)."
- Schmitz (1990, p. 368):
 "The findings of Berry et al. (1977, 1987) also demonstrate the marked superiority of the integration mode."
- Phinney (1991, p. 204):
 "Finally, integration involves a combined identification with one's own ethnic group and with mainstream culture. A number of empirical studies indicate that this mode of adaptation is related to better psychological outcomes than the other alternatives (Berry et al., 1987; Szapocznik & Kurtines, 1980)."
- Boski (1991, p. 44):
 "Integration also turns out to be an important predictor of psychological well-being or low acculturative stress (Berry, Kim, & Boski, 1987; Berry, Kim, Minde, & Mok, 1987)."
- Williams & Berry (1991, p. 635):
 "Those who feel marginalized tend to be highly stressed, and those who seek to remain separate are also highly stressed; in contrast those who pursue integration are minimally stressed, and assimilation leads to intermediate levels of stress (Berry et al., 1987)."
- Phinney, Chavira, & Williamson (1992, p. 303):
 "The literature generally suggests that among the four acculturation options, integration may be the most adaptive (Berry, Kim, Minde & Mok, 1987)."
- Berry, Poortinga, Segall & Dasen (1992, p. 287):
 "There is evidence (Berry et al., 1987) that mode of acculturation is one important factor: those who feel marginalized tend to be highly stressed, and those who maintain a separation goal are also stressed; in contrast those who pursue integration are minimally stressed, while assimilation leads to intermediate levels."
- Krishnan & Berry (1992, p. 208):
 "It is understandable that those who have higher Integration attitudes, as opposed to other acculturative attitudes, feel relatively more at ease in both cultures and thus feel less overall stress. This conforms to one of the most frequent findings in the acculturative stress literature (Berry et al., 1987)."
- Sands & Berry (1994, p. 119):
 "As an acculturation strategy, marginalization has been found to be the least desirable mode of acculturation, leading to a variety of possible acculturative stresses and mental health problems (e.g., Berry et al., 1987)."
- Donà & Berry (1994, p. 60):
 "Acculturating individuals who interact both with their ethnic community and with the dominant group tend to show lower levels of stress (Berry et al., 1987)."
- Ward & Kennedy (1994, p. 331):
 "In this regard, comparative research has demonstrated that marginalization and separation are associated with high levels of acculturative stress (as assessed by the measurement of psychological and psychosocial symptoms), integration is associated with a low level of stress, and assimilation is linked with an intermediate stress level (Berry et al., 1987)."
- Glass, Bieber & Tkachuk (1996, pp. 583-584):
 "Some researchers agree that bicultural individuals experience the least amount of acculturative stress and marginal individuals experience the most (Berry et al., 1987; Berry & Annis, 1974; Szapocznik & Kurtines, 1980; Szapocznik, Kurtines & Fernandez, 1980)."
- Liebkind (1996, p. 163):
 "There is argument and some empirical evidence that the last option, maintaining both one's own ethnic traditions and contacts with the majority culture, affords the best, and marginality the worst, psychological outcomes (Berry et al., 1987; Phinney et al., 1990; Sue & Sue, 1990)."
- Bourhis, Moïse, Perreault & Sénécal (1997, p. 378):
 "Furthermore, Berry, Kim, Minde, and Mok (1987) found that immigrants in Canada who adopted the integration strategy were minimally affected by acculturative stress whereas those who felt marginalized tended to be highly stressed, closely followed by those adopting the separation strategy. Berry found that immigrants pursuing the assimilation strategy experienced intermediate levels of acculturative stress."
- Hanna (1998, p.1333):
 "Cultural integration can be viewed as a coping style resulting in lower stress during the acculturation process (Berry et al., 1987)."
- Hocoy (1999, p. 88):
 "Marginalization involves a loss of cultural identity as well as the absence of positive relations with the dominant group (Berry, 1984) and of the four modes of acculturation, is generally associated with the most acculturative stress (Berry & Sam, 1997), that is, the (most) psychological, social and physical health problems emerging from acculturation (Berry, Kim, Minde, & Mok, 1987)."
- Ward & Rana-Deuba (1999, p. 424):
 "In this regard, comparative research has demonstrated that marginalization and separation are associated with high levels of acculturative stress (as assessed by the measurement of psychological and psychosocial symptoms), integration is associated with a low level of stress, and assimilation is linked with an intermediate stress level (Berry et al., 1987)."
- Nguyen, Messé & Stollak (1999, p. 6):
 "To complicate matters further, additional research reports a curvilinear relationship (where moderate levels of acculturation are associated with positive adjustment) (e.g., Berry, Kim, Minde & Mok, 1987; Szapocznik & Kurtines, 1980; Szapocznik, Kurtines & Fernandex, 1980; Wong-Rieger & Quintana, 1987)."
- Dien, S. D. (2000, p. 2):
 "Successful adaptation is generally seen as assimilation or acculturation, meaning the abandonment of one's own culture in favor of the majority culture (Berry, 1990; Berry, Kim, Minde & Mok, 1987)."
- Brown (2000, p. 765):
 "Research suggests that the 'integration' strategy (high on both orientations) is often the preferred strategy among minority groups and seems to be associated with the least acculturative stress and better educational outcomes (Berry, Kim, Minde & Mok, 1987; Berry, Kim, Power, Young & Bujaki, 1989; Liebkind, in press; van de Vijver, Helms-Lorenz & Feltzer, 1999)."
- Farver & Lee-Shin (2000, p. 317):
 "For example, current studies suggest that 'integration' may be the most adaptive form of acculturation (Berry, Kim, Minde & Mok, 1987)."
- Ryder, Alden & Paulhus (2000, p. 53):
 "Berry concluded that the integration strategy leads to the best mental health outcomes, whereas marginalization leads to the worst outcomes (Berry, 1990, 1997, 1999; Berry, Kim, Minde, & Mok, 1987; Berry & Sam, 1996). Assimilation and separation fall somewhere in between."
- Eyou, Adair & Dixon (2000, p. 539):
 "Integrated adolescents were found to have significantly higher self-esteem (as indicated by lower scores on the Negative Self Image Scale) than their separated or marginalized peers. This finding is consistent with previous studies using measures such as self-concept, happiness, and psychosocial functioning (Berry et al., 1987; de Domanico et al., 1994; Verkuyten & Kwa, 1994; Same and Berry, 1995)."
- Duan & Vu (2000, p. 234):
 "This differentiation will leave them in a special position where choosing to have the best of two cultures has obvious psychological advantages over taking one or the other extreme of the acculturation process continuum (Berry et al., 1987)."
- Phinney, Horenczyk, Liebkind & Vedder (2001, p. 502):
 "The literature has generally shown integration, that is, simultaneous ethnic retention and adaptation to the new society, to be the most adaptive

mode of acculturation and the most conducive to immigrants' well-being, whereas marginalization is the worst (Berry, 1997; Berry, Kim, Minde, & Mok, 1987; Berry & Sam, 1997; Howard, 1998)."

Abouguendia & Noels (2001, p. 165):

"According to Berry (1997), the acculturation mode linked with the most positive outcomes is integration, and the one associated with the least positive outcomes is marginalization, with separation and assimilation modes falling in between. This pattern has been demonstrated in several studies on different cultural groups (e.g., Berry, Kim, Minde, & Mok, 1987; see Berry & Sam, 1996, for review)."

Farver, Narang, & Bhadha (2002, p. 339):

"The work of Berry and his colleagues (Berry, 1980; Berry et al., 1989; Berry, Kim, Minde, & Mok, 1987; Sam & Berry, 1995) assessing the acculturation strategies of various immigrant groups in North America has demonstrated that integration is the most psychologically adaptive pattern."

Farver, Bhadha & Narang (2002, p. 25):

"These results support prior research which has found that an integrated style of acculturation is associated with positive psychological outcomes (e.g., Berry et al., 1987)."

Nguyen & von Eye (2002, p. 202):

"Still, other studies indicated a curvilinear relationship (where moderate levels of acculturation were linked with positive adjustment (e.g., Berry, Kim, Minde & Mok, 1987; Wong-Rieger & Quintana, 1987), while additional studies revealed no relationship at all (e.g., Smither & Rodriguez-Giegling, 1979)."

Tartakovsky (2002, p. 1846):

"Immigrants' positive well-being and effectiveness of absorption are associated with the choice of the integration acculturation mode (Berry, 1997; Berry et al., 1987; Dona & Berry, 1994; Liebkind, 1996)."

Kosic (2002, p. 182):

"According to Berry and colleagues (Berry et al., 1987; Berry et al., 1989), separated and marginalized immigrants had high levels of acculturative stress (assessed by a measure of psychological and psychosomatic symptoms), integrated immigrants had low levels of stress, and assimilated immigrants were associated with intermediate levels of stress."

Neto (2002, p. 34):

"Integration is considered to be the most effective strategy with regard to definitive adjustment. Findings demonstrate the marked superiority of the integration mode (Berry et al., 1987; Neto, 1993)."

Neto (2002, p. 336):

"The literature generally suggests that among the four acculturation

options, integration must be the most adaptive (Berry et al., 1987; Neto, 1993a; Schmitz, 1992)."

Jasinskaja-Lahti, Liebkind, Horenczyk & Schmitz (2003, p. 81):

"The literature has generally shown that integration is the most adaptive mode of acculturation and the most conducive to the immigrants' well being as compared to other acculturation options (Berry, 1997; Berry et al., 1987; Ward, 1996; Phinney et al., 2001)."

Kosic (2004, p. 271):

"Research on immigrants' attitudes within a wide range of ethnic groups in Canada (Berry, 1990; Berry, Kalin & Taylor, 1995; Berry & Kim, 1988; Berry et al., 1987; Moghaddam, Taylor & Lalonde, 1987; Zheng & Berry, 1991) and in USA (Lambert & Taylor, 1989), has revealed that integration (positive attitudes towards original culture and towards social interactions with the members of the host group) affords the lowest acculturative stress. In these same studies, assimilation (rejection of the original culture and preference for interaction with members of the host group) achieves a medium degree of acculturative stress."

van de Vijver & Phalet (2004, p. 220):

"Compared to alternative assimilation, separation, or marginalisation strategies, the integration strategy is most often associated with successful personal adjustment (Berry et al., 1987)."

Neto, Barros & Schmitz (2005, p.22):

"The literature generally suggests that among the four acculturation options, integration is the most adaptive (Berry et al., 1987; Neto, 1993)."

Quarasse & van de Vijver (2005, p. 255):

"The strategies of integration and separation were related to better psychological adjustment, while marginalization and assimilation were related to lower levels of psychological adjustment (Berry & Annis, 1974; Berry, Kim, Minde & Mok, 1987)."

Ward (2006, p. 249):

"There is also strong international evidence that acculturating individuals who adopt an integrated (or bicultural) strategy demonstrate better psychological and sociocultural adaptation (Berry, Kim, Minde & Mok, 1987; Ward & Kennedy, 1994)."

Beiser & Hou (2006, p. 138):

"The integration option is posited as the choice most conducive to long-term well-being (Berry, 1997; Berry, Kim, Minde & Mok, 1987)."

3) It cannot conclude anything about Marginalization conceived as dislike of two cultures.

4) It cannot conclude anything about minority acculturation in contexts outside of Canada.

Subsequent studies citing the 1987 review are in error if they claim that it shows support for these four claims.

As shown in Table 2, many studies have mistakenly claimed that Berry et al. (1987) supports the idea that Integration is less stressful than Assimilation, or that Marginalization is the most stressful mode of acculturation. Many of the authors in Table 2 are full professors, department heads, and some are journal editors. The journals carrying this miscitation include *Psychological Bulletin*, *American Psychologist*, *Journal of Cross-*

Cultural Psychology, and other high status journals. That is, the top scholars in the field of acculturation research, writing in the best journals, are making the kind of errors for which BA students would receive low grades if caught doing this.

These kinds of errors would happen less if authors, including professors and students, would carefully and thoughtfully read every article that they cite. It is most important to look at the data and their analysis, and not rely on the interpretations of these data in the discussion or in the brief summary in the abstract. As noted by Rosenthal (1991, p. 13) after long experience gathering research results for meta-analyses on various topics:

"When we refer to the results of a study, we do not mean the conclusion drawn by the

investigator since that is often only vaguely related to the actual results. The metamorphosis that sometimes occurs between the results section and the discussion section is itself a topic worthy of detailed consideration."

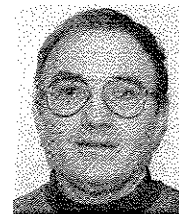
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