

A Comparison of South Korea and North Dakota Conventional and Sustainable Farmers' Participation in Community Organizations*

Park, Duk-Byeong** · Gary A. Goreham*** · Cheong, Ji-woong****

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ABSTRACT

This study compared the levels of North Dakota and South Korean conventional and sustainable farmers' participation in community organizations. The North Dakota data were collected in 1990 from a sample of 568 farm and ranch operators, and the South Korean data were collected in late 1999 and early 2000 from a sample of 147 farmers through interviews and surveys. The data were analyzed using the SPSS ANOVA computer program.

The sustainable farmers in both countries were more likely to participate

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** Researcher, Ph. D., Rural Living Science Institute, RDA.

*** Associate Professor / Chair, Ph. D., Department of Sociology / Anthropology, North Dakota State University, USA.

**** Professor, Ph. D., Seoul National University, South Korea.

in community organizations than the conventional farmers. Nevertheless, through this comparative study it was found that some differences between two countries exist due to their different cultural backgrounds. Whereas Americans were oriented more to morality and ethics influenced by church, farmers in Korea were more influenced by civil movements. Whereas the reduced tillage farmers in America were more likely to be sustainable farmers, the mixed farmers in Korea were more likely to belong to conventional farmers. While individuals in community organizations focused on the economics of agriculture, sustainable farming and farmers' social participation were social matters, which were used to develop sustainable community.

Key Words : sustainable farm, community organization,
community participation

I. Introduction

"Sustainability" and "participation" have become the development watchwords, and with good reason, since both concepts were sorely lacking in development practice from the early 1960s well into 1990s(Rocheleau, 1994). The focus on agriculture in last decade has been on industrial agriculture and sustainable agriculture. Sustainable agriculture today is a significant and new direction for the future of agriculture and rural community development. It has been argued that sustainable farming promotes greater participation in local community organizations than does conventional farming agriculture. Active social participation by residents of rural communities is vital to the survival and effective functioning of these places especially given the powerful social and economic forces that are undermining their vitality(Goreham, et al., 1992). The Community Development Society(CDS) emphasizes that cooperation with other community development individuals and organizations and promoting active, representative citizen participation can meaningfully influence decisions that affect community members lives. Communities are normally small and

organized around kinship, ethnic ties, or attachment to place. However, they are also organized around joint activities of production, consumption, or common life style(Lynch, 1981). Sustainable agriculture makes farmers change their activities of production, social interaction, and life style and meaning of life-world. Community residents do work that the community needs to survive as a group. The group, in turn, satisfies and involves its members over a long period of time(Kanter, 1972).

Based on a study of conventional and alternative farmers' participation in community organizations in North Dakota(Goreham, et al., 1992), this study compares its results with South Korean farmers who are encouraged to adopt sustainable farming techniques in the late 1990s by the Government of Republic of Korea. This comparative study offers new ideas to South Korean farmers to develop environmentally sound and sustainable agricultural policies.

II. Past Research on Farmers' Participation in Community Organization

Sustainable agriculture emphasizes local production, regional processing, diversity, locally adapted systems, and community, and cooperation. Ritchie and Hayes(1998) suggest that farmers view environmental programs with prescriptive regulations and standards as incompatible with viable production agriculture. Thus farmers' participation in community organizations is important. Farmers practicing sustainable agriculture tend to increase their purchases from local business and to transfer a greater share of productive value of agricultural resources to local businesses. Flora(1995) insisted that "a pattern of problem solving guided by norms of mutual trust and reciprocity is encouraged by the sustainable agricultural movement and the various organizations that give social expression to that movement, and that this is what helps to nurture and build social capital within small, agriculturally dependent rural communities"(p.228).

The level of participation in voluntary organizations plays an important part in rural community life and development as indicated by past research. Berger and Neutaus(1977) suggested that "mediating structures" such as family,

neighborhood, church, and voluntary organizations are keys to empower individuals in a bureaucratic, technocratic society. Goreham, et al.(1988) found that voluntary organizations raise residents' awareness of rural community issues. Esman and Uphoff(1984) stated that local associations are necessary for community development, and that development can severely limit or impede development. In a study of community development efforts in India, Dongre(1984) found that voluntary association tends to be superior to governmental efforts that promote rural development because these efforts typically do not provide the level of involvement and cooperation found in voluntary associations. Thus, voluntary organizations are important to the health of rural communities especially in times of rapid social and economic change.

Botes and Van Rensburg(2000) stated that many development scholars and practitioners have pondered community participation for the last two to three decades. Some even called the 1980s the decade of community based organizations as a manifestation of organized community participation.

Several studies examined the level of involvement of farmers in rural community organizations, the nature of this involvement, and its motivations. For example, Mangus and Cottam(1941) analyzed farmers' participation in community organizations in Ohio. They studied affiliations, attendance, financial contributions, and leadership roles in church groups, agricultural extension groups, lodges, educational groups, recreational groups, and cooperatives. Nearly one-third of the farm families did not participate in organized groups, 47 percent participated only occasionally, and 24 percent participated actively. Church groups had a greater amount of affiliation, attendance, contributions, and leadership activity than all of the other organizations combined.

Lindstrom(1936, 1958) twice studied Illinois farm families to assess both the levels of, and reasons for, organizational involvement. In the 1936 study, half of the respondents were members of churches ; one-quarter belonged to the Farm Bureau ; one-fifth were in lodges ; and one-tenth belonged to social clubs. Among lodge members, most(84 percent) joined for social enjoyment. Among members of farm business and educational organizational organizations, over

half joined for information, benefits, and services ; and about a third joined to advance various causes. In a later study, Lindstrom(1958) found that most(88 percent) of the sampled farm families belonged to "special interest" organizations and three-fourths to "common interest" organizations. Sociability and member education were the reasons most frequently given for joining organizations.

Structural factors also have been studied as a possible explanation of farmers' social participation patterns. Anderson and Ryan(1943) found that farm owner-operators and their families participated in group activities more than did tenants and farm laborers. But, in cash-grain and high land-value areas (e.g., central Illinois), tenants and part-owners sometimes outranked owner-operators in social participation.

Today, many farmers advocate a fundamental change rather than a modification in farming practices. The call for reform grows out of a perception that current or "conventional" farming techniques are detrimental to the environment, and should be replaced with alternative, more sustainable farming practices. The present study examines that previously has been ignored in the literature—namely, the type of farming practiced.

III. Social Change and Participation : A Theoretical Framework

Meister's theory of social participation(1984) suggested that advocates of sustainable agricultural practices are likely to be involved more in voluntary organizations than are conventional farmers. He posited a linkage between social change and social participation in a way to better understand social participation. His first hypothesis stated : "individuals and groups that feel social change most intensely create more associations and participate more in them"(p.82).

Extending Meister's theory, sustainable farmers will "feel social change most intensely," both because they believe that social change is necessary and because they are a part of that change. Sustainable farmers fit the dominant

paradigm of how farming should be conducted(Beus and Dunlap, 1990), and are unlikely to perceive a need for the types of changes advocated by sustainable farmers, or feel significantly threatened by this, as yet, small group of change agents. Thus, we predict that sustainable farmers will participate more in community organizations than will conventional farmers.

Meister(1984) then refined the link between social change and participation by suggesting that the more individuals are affected by social change(the greater the distance that separates them from old forms of social prestige), the more they seek the social prestige given by associations”(p.85). Thus, individuals involved in social change will participate in organizations most closely associated with the advocated change. Individuals can challenge extant hierarchies and established new sources of prestige through participation in such organizations. In other words, social change may lead to greater involvement by reformers in some, but not all, community organizations.

When sustainable farmers advocate that the current prestige hierarchy of farm practices is inverted, they are, in effect, separating themselves from the extant forms of social prestige. These farmers believe that the prestige associated with being a good farmer should be derived from eliminating, and not just improving, conventional tillage, and/or chemical practices.

Similarly, Meister argued that “the greater the degree of information, the stronger the participation”(p.92). The need for new knowledge can provide an important incentive for farmers to participate in social organizations. Because sustainable farming practices require new technologies, their practitioners have intensive information needs. Thus, we predict that sustainable farmers will participate more than conventional farmers in organizations that relate to the advocated change and that provide needed information about new farming practices.

The need for information may lead to greater participation, not only in certain farm and commodity groups, but also in another important organization in rural areas - the Cooperative Extension Service. Although this organization has much criticized for not providing the information organic farmers should be especially interested in its programs. Accordingly, we predict that one type of

sustainable farmer, those practicing no-till, are more likely than conventional farmers to participate in Extension Service activities.

Importantly, Meister's(1984) hypotheses do not give reason to expect that conventional and alternative farmers will participate in differing degrees in organizations that are unrelated to farming, such as PTA or school-related groups, civil clubs, or service or professional organizations. But, there is reason to expect, independent of his hypotheses, that alternative farmers in church activities. Churches traditionally have provided a moral and theological basis for farming. For example, the National Catholic Rural Life Conference served as an advocate of farmers throughout the farm crisis of the 1980s. Various denominations combined efforts to raise hunger awareness ; and theologians, like Leonard Weber, Walter Brueggemann, and C. Dean Freudenberger, have provided theological underpinnings for land and environmental stewardship (Evans and Cusack, 1987). Although different denominations and theologians vary considerably in their approaches to agriculture, notions of stewardship, environmental responsibility, holistic thinking, and simplicity appeal to many alternative farmers, especially organic farmers, will have comparatively high participation in religious organizations.

Flora(1995) insisted that the sustainable agricultural organization was now viewed as an important part of the community fabric, involving community people and farmers. She also found that sustainable agriculture is and an approach to agriculture in which farmers analyze their specific farming systems and adapt them to increase economic viability, environmental quality and quality of life. Movement toward sustainable agriculture through local sustainable farming organization is that community citizens and farmers both begin to see that their action-collective for communities and individual or household for farms-can make a difference in achieving goals. Further more, Meares(1997) and Chiappe and Flora(1998) insisted that the social construct of gender made a difference in how these farmers perceive quality of life. This social construct, in turn, affected participation in the sustainable agriculture movement.

IV. Methods Used in the Study

1. Sample

A sample of 568 North Dakota farm and ranch operators was conducted in 1990. The sampled farmers were approached in three stages: a) introductory letter, b) phone survey, and c) follow-up mail survey. The response rate for the phone survey was 81 percent. Overall, 59 percent of those persons initially contacted completed both the telephone and mail survey(Goreham, et al., 1992).

The Korean data for quantitative comparison were collected in late 1999 and early 2000 from a sample of 147 farmers through interview and questionnaire methods and analyzed primarily by the ANOVA of the SPSS program. The Korean sampling procedures were similar to those used in North Dakota. About 100 sustainable farmers from across Korea were traced and asked to answer the questionnaire. Sixty-eight of them were used for analysis. Out of 68 sustainable farmers, mainly from Yangpyeong County of Gyeonggi Province, but some also from Hwasoon County of South Jeolla Province and Jeju Island Province areas with a substantial number of sustainable farmers, 39 were identified as "sustainable" farmers and 29 were identified as "mixed." It was noticed that most of the sustainable farmers(29 of 30) were members of the Paldang(name of a big dam near Yangpyeong) Organic Agriculture Movement Center which is a civil farmers' organization consisting of organic farmers. Out of the other 10 sustainable farmers, five were members of the Hanwoomool Farming Cooperative most of whom grow natural herbs plants in the Hwasoon area.

We replaced missing data with zeros where respondents had left blanks on social participation categories but had provided any information within that category for any organization. If no information was provided for any organization on a category, it was left as missing data, thus adding to the conservative nature of our data analysis.

2. Types of Farmers

Researchers often compare sustainable farms with conventional farms in order to better understand sustainable farming. Unfortunately, the literature lacks a standard set of criteria for classifying farms. Youngs et al.(1992) analyzed data from a survey of North Dakota farmers to empirically compare nine approaches to classification. These classifications were modestly inter correlated and had similar relations to four farm/farmer characteristics(number of acres farmed, net income per acre farmed, views on farm policy, and number of organizational memberships), but the different classifications were not directly interchangeable and appear to reflect quasi-independent dimensions associated with chemical use and tillage practices.

According to these classifications, Goreham, et al.(1992) identified organic/natural farms as alternative farms in North Dakota. Whether they are called organic farms, low-input/sustainable agriculture, ecological farms, regenerative farms, or the sustainable farms, they are categorized as sustainable farmers (officially "Environment-friendly" farms) by the Korean government. The type of agriculture in Korea were classified through farmer self-classification of as a result of the Act of Sustainable Agriculture. According to the provisions of the Act, sustainable agriculture contains low-input pesticides and chemical fertilizer.

The independent variable for this analysis, type of farmer in North Dakota, has three categories: conventional, reduced tillage, and organic (Goreham, et al., 1992). The category of reduced-tillage is excluded in Korea case. Instead, sustainable farmers are divided into two categories: (full) sustainable farmer and mixed farmer.

Whereas the types of farmers in North Dakota were determined by farming practices, attitudes, self-identification, and group membership, the sustainable farmers in Korea were identified as Environment-friendly farmers, who are officially categorized as such.

3. Social Participation.

The respondents were asked to list organizations to which they belonged, and their level of participation in each. Eight general types of organizations in North Dakota were listed in the questionnaire, with parenthetical examples of each: farm organizations(Farmers Union or Farm Bureau); commodity groups (Wheat Growers or Cattlemen's Association); civic or service clubs(Lions or Toastmasters); professional or business organizations(Jaycees); PTA or other school organizations(no examples); township or county commission or other governmental offices(no examples); church(activities like men's groups or Sunday School); and cooperative extension groups(4-H or Advisory Committees).

Since the types of Korean farmers' organizations are different from those in USA, the organizations with which farmers are affiliated were divided into five categories: farm organizations(Farming Cooperative, Farmers Union, or Farmers Association); PTA or other organizations(Alumni Association or Friendship Association); kinship groups; civic clubs or political parties; and religious organizations(Christian or Buddhist). Farm organizations in Korea were not divided into two organizations because farm organizations usually plays a role of commodity organizations together.

Although Township or County Board, Cooperative Extension Group, and Commodity Groups are considered more important than Korea, Kinship Groups are very crucial to Korean farmers. Therefore, the Kinship Group is categorized as a separated group, and the Commodity Group is included in Farm Organizations in Korea.

Independent variable is farm types which are conventional, reduced tillage, and organic farming in North Dakota, which are conventional, mixed, and sustainable farming in South Korea. Social participation which is dependent variables is number of organizations, dollars of contributions per a month, number of offices, number of hours per a week, organizational index. Organizational index is the sum of number of organizations, dollars of contributions per a month, number of offices, and number of hours. Those are calculated by Z-scores which are divided by each sum. Therefore, each dependent variable was considered evenly with no weighting.

V. Results of the Study

We hypothesized that sustainable farmers would have higher levels of participation than conventional farmers in farm, commodity, extension, and church organizations. Farm type was not expected to be associated with involvement levels in the other types of organizations. These hypotheses were partially confirmed (see Table 1). Because of the exploratory nature of this study, we differentiated findings that were significant at lower levels on Table 1.

1. Farm, Commodity, Extension, and Civil Organizations

The type of farm in North Dakota was significantly associated with participation in farm, commodity, and extension organizations. The Type of farm in Korea was significantly associated with participation in farm and civil organizations. For farm organizations in North Dakota and Korea, farm type was related to the number of group memberships, dollars contributed, and the aggregate organizational index.

For commodity organizations in North Dakota, farm type was related to the number of group memberships, number of hours contributed to organizational activities, dollars contributed, and the aggregate organizational index. For extension organizations in North Dakota, farm type was related to number of group memberships, number of hours contributed to extension activities, and the aggregate organizational index. Extension organizations were not organized in the questionnaire because extension projects in Korea were executed mainly by the government and not by cooperative organization.

For civil organizations, farm type in North Dakota was related to the number of group memberships. Farm type in Korea was related to the number of group memberships, dollars of contributions, number of offices, and organizational index.

2. Participation in Religious and Kinship Organizations

Sustainable farmers(organic farmers) in North Dakota were predicted to participate more than conventional farmers in church organizations. Sustainable farmers contributed more hours to church activities than did their counterparts, and while they had higher levels of participation in all but one of the other categories, the differences were not statistically significant. However, sustainable farmers in Korea were predicted to participate less than conventional farmers in religious(Christian and Buddhist) and kinship organizations. The difference was not statistically significant.

Table 1. Social participation by type of farmer and type of organization

Country	Type	Types of organization								
		Farm	Commod	Civil	Profes	School	Gov't	Religio	Exten	Kin
		Number of organizations								
North Dakota	CONV	1.29	.48	.33	.14	.17	.67	.89	.03	-
	NOTI	1.77	1.10	.55	.23	.10	.61	.67	.29	-
	ORG	1.64	.46	.18	.25	.11	.32	1.21	.07	-
	ANOVA	3.97**	6.28**	2.56*	.76	.40	2.30*	1.88	8.38**	-
South Korea	CONV	3.27	-	.00	-	4.32	-	2.46	-	8.63
	MIX	3.32	-	1.75	-	4.42	-	2.56	-	7.32
	ORG	5.81	-	2.93	-	3.13	-	3.21	-	7.84
	ANOV	3.29**	-	3.83**	-	1.21	-	.85	-	.35
		Dollars of contributions								
North Dakota	CONV	.00	.00	1.59	.00	.00	-	181.70	-	-
	NOTI	3.48	6.52	8.70	.00	.00	-	264.20	-	-
	ORG	12.74	194.70	.00	88.16	1.05	-	381.60	-	-
	ANOVA	3.98**	3.37**	1.60	4.86**	2.32*	-	.82	-	-
South Korea	CONV	8.39	-	.00	-	8.52	-	3.55	-	4.32
	MIX	8.01	-	.02	-	7.73	-	2.94	-	3.50
	ORG	15.48	-	.13	-	11.10	-	4.17	-	3.23
	ANOVA	4.31**	-	2.72*	-	1.69*	-	1.02	-	1.34
		Number of offices								
North Dakota	CONV	.08	.02	.06	.13	.03	.57	.52	.02	-
	NOTI	.13	.10	.03	.10	.03	.40	.33	.07	-
	ORG	.20	.08	.08	.08	.00	.36	.44	.00	-
	ANOVA	.86	1.31	.17	.16	.24	1.14	.53	1.47	-
South Korea	CONV	.40	-	.00	-	.45	-	.32	-	.03
	MIX	.51	-	.02	-	.26	-	.59	-	.07
	ORG	.57	-	.53	-	.31	-	.63	-	.04
	ANOVA	.57	-	1.72*	-	.43	-	.23	-	.34

Country	Type	Types of organization								
		Farm	Commod	Civil	Profes	School	Gov't	Religio	Exten	Kin
		Number of organizations								
		Number of hours								
North Dakota	CONV	.81	.16	1.11	1.41	.51	3.71	4.13	.05	-
	NOTI	3.81	2.14	1.29	.60	.45	4.97	3.34	1.41	-
	ORG	2.80	1.80	.60	.52	.16	.80	8.08	.44	-
	ANOVA	2.14	2.88*	.27	.50	.36	.74	2.56	3.11	-
South Korea	CONV	1.59	-	.00	-	.47	-	2.72	-	.03
	MIX	1.41	-	.01	-	.37	-	2.99	-	.01
	ORG	2.48	-	.07	-	.50	-	3.13	-	.02
	ANOVA	2.31*	-	.51	-	.73	-	1.23	-	.13
		Organizational Indexes (z-score)								
North Dakota	CONV	-.05	-.83	-.48	-.20	.00	.53	.27	-.63	-
	NOTI	1.52	1.37	.41	-.18	-.10	.25	-.04	1.26	-
	ORG	1.76	1.03	-.75	1.40	.06	-.87	1.66	-.40	-
	ANOVA	3.59**	6.18**	1.35	1.34	.01	1.17	1.17	4.81**	-
South Korea	CONV	-.04	-	-.13	-	.23	-	.72	-	.92
	MIX	.12	-	-.09	-	.28	-	.69	-	.87
	ORG	1.48	-	.01	-	.37	-	.95	-	.79
	ANOVA	3.84**	-	2.21*	-	1.19	-	.97	-	.25

Note : Farm = Farm organizations ; Commodity = Commodity groups ; Civic = Civic or Service Clubs ; Profes = Professional or business organizations ; School = PTA or other school organizations in North Dakota, school alumni friendship clubs in Korea ; Gov't = Township or County commission or Governmental Offices ; Religio = Christian in North Dakota, Christian and Buddhist in Korea ; Exten = Cooperative Extension groups ; Kin = Kinship groups. CONV = Conventional farmer ; NOTI = reduced tillage farmer ; and ORG = Organic farmer ; MIX = Mixed farmer. ANOVA = analysis of variance F-value.

* p<.10 ** p<.05

3. Participation in other Community Organizations.

Participation of other organizations (participation of professional, school, and government organizations) between conventional and sustainable farmer were not statistically significant in North Dakota or Korea. Only one effect in North Dakota was found for professional organizations—farm type was related to dollars contributed. One effect was found for school-related organizations—farm type was related to dollars contributed in North Dakota and Korea. While school organizations in North Dakota were related to PTA, those in Korea

mainly were related to alumni and friendship clubs. Regardless of type of agriculture, Korean farmers participated strongly in those organizations.

VI. Implications of the Study

This study found several important linkages between agricultural practices (farm type) and organizational participation. First, differences were found in organizational participation patterns of conventional and sustainable farmers. Sustainable farmers in North Dakota and Korea displayed the highest levels of participation in most types of organizations.

Second, reduced tillage farmers and organic farmers in North Dakota often have higher levels of participation in farm organizations, commodity groups, and cooperative extension service groups than did either conventional farmers or even organic farmers in some instances. Both reduced-tillage farmers and organic farmers fall within the broad category of sustainable farmers. In contrast, mixed farmers in Korea have almost the same levels of participation with conventional farmers. These results mean that mixed farmers are likely to have properties and attributes similar to those of conventional farmers.

Third, organic farmers in North Dakota participated somewhat more than the others in church-related organizations. Sustainable farmers in Korea were not only more likely to participate in religious organizations than the others farmers, but they were also less likely to participate in kinship organizations. However, the differences were not statistically significant. These results may imply that sustainable farmers are more likely to escape from traditional culture and value. Even though religious organizations take an initiative sustainable and environmental social movements and many sustainable agriculture products are actually marketed by these organizations, rural residents in Korea did not participate in religious organization.

Fourth, the comparatively high level of participation of sustainable farmers in community organizations between North Dakota and Korea tends to be

limited to “special interest” types of organizations (i.e., farm organizations and commodity groups). Few significant differences were found for the “common interest” organizations (i.e., professional organizations, school organizations, government offices, and kinship organizations). Thus, it seems that sustainable farmers' commitments to community organizations exceeds that of conventional farmers for farm-related activities, but not necessary for concerns affecting the general infrastructure of rural communities. Based on the types of organizations in which the three types of farmers are mostly involved, sustainable farmers in North Dakota may focus more on the economics of agriculture and moral or ethical issues, whereas sustainable farmers in Korea may focus more on the economics of agriculture and political and social movements. It has been shown that social participation could occur because problems, as perceived by the community members, were not being solving by existing authorities. It means that government policy could not help farmers survive with world economy situations.

Overall, the findings are consistent with Meister's (1984) hypothesized impact of social change on social participation. They support Meister's prediction that people involved in change are especially likely to seek social participation. Perhaps, sustainable farmers feel so disenchanted with many of today's farm organizations that their desire to participate is dampened. Reduced farmers and mixed farmers may be less likely to feel similarly disenchanted. They may feel comfortable participating actively or passively and pushing for change within extant organizations. Additional research is needed to test this possibility and to further specify the types of social participation sought by persons making fundamental changes in their agricultural practices.

VI. Conclusion

This study landed support for Meister's theory in both America and Korea that “individuals and groups that feel social change most intensely create more association and participate more in them” (Meister 1984 : 82). The sustainable

farmers in both countries may have felt social change most intensely not only because they believed that social change was necessary but also because they were a part of such change. The significant relationship between farmers' engagement in sustainable farming and their participation in voluntary social organizations evidences such theory in both countries.

Nevertheless, through this comparative study it was found that some differences between two countries exist due to their different cultural backgrounds. Americans are oriented more to morality and ethics influenced by the churches, whereas Koreans are more oriented to civil movements. The mixed farmers in America are reduced tillers who are more likely to be sustainable farmers, whereas those in Korea are more likely to belong to conventional farmers.

Those farmers who participate in sustainable farming, whether in South Korea or North Dakota, consider important. However, it should be kept in mind that the social infrastructure or social capital is even more important to develop sustainable agriculture and rural community. Sustainable farming and farmers' social participation are social matters beyond the economy.

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