

A COMPARATIVE ANALYSIS OF OHIO AGRICULTURE TEACHERS' LEVEL OF JOB SATISFACTION

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The purpose of this study was to report similarities and dissimilarities of the descriptive-correlational job satisfaction studies conducted by Newcomb, Betts, and Cano (1987), Cano and Miller (1992), and Castillo, Cano, and Conklin (1997). Specifically, this study sought to compare overall job satisfaction levels and the factors associated with job satisfaction/dissatisfaction among female and male agriculture teachers in Ohio over a ten-year period. Job satisfying (motivator) factors investigated were: achievement, advancement, recognition, responsibility, and the work itself. Job dissatisfying (hygiene) factors investigated were: interpersonal relations, policy and administration, salary, supervision, and working conditions. Demographic characteristics in all three studies were reported.

There has been a major increase in the number of female teachers. Moreover, there was a decrease in the number of teachers of agriculture in Ohio. Overall, Ohio agriculture teachers have remained satisfied with their jobs over the past ten years. Female and male teachers have remained slightly dissatisfied to satisfied with the motivator and hygiene factors of their job. It was recommended that bureaucracies of the job and opportunities for advancement be reconsidered and investigated for gender bias. Furthermore, informative administrative training with regard to agricultural education program responsibilities was suggested.

Introduction/theoretical Framework

Roznowski and Hulin (1995) wrote that the most important information to have regarding an employee is a validated measure of their level of job satisfaction. Job satisfaction is defined as, "a pleasurable positive emotional state resulting in the appraisal of one's job or job experiences" (Locke, 1976, p. 1300). More recently, Wilcox (1992) defined job satisfaction, "as the state where employees are able to obtain the higher social and egotistic human needs" (p. 13).

Human needs are the founding theoretical framework for job satisfaction. The Hierarchy of Human Needs, now recognized as the deprivation/gratification proposition, suggested that when an individual identified a need which was not being met, behaviors were directed toward satisfying a particular need (Mertler, 1992). Need-satisfaction models suggest that

congruence among an employee's needs and the extent to which the needs are supplied by their work situation or environment, influences affective employee reactions. Work situations and environments that enable attainment of desired outcomes are thought to increase job satisfaction. Likewise, perceptions of work situations and environments which hinder desired outcomes will lead to dissatisfaction with certain aspects of the job (Judge, Hanisch, & Drankoski, 1995). Herzber, Mausner, and Snyderman (1959) developed a need satisfaction model called the Motivator-Hygiene Theory.

The premise of the Motivator-Hygiene Theory was that jobs have factors which lead to satisfaction or dissatisfaction. Job satisfying (motivator) factors included achievement, recognition, work itself, responsibilities, and advancement. Job satisfying factors allowed individuals to satisfy their psychological potential

and were usually related to the work itself. Job dissatisfaction (hygiene) factors were related to the work environment and were pursued in order to prevent job dissatisfaction or discomfort. Job dissatisfaction factors included pay, working conditions, supervision, policies, and interpersonal relationships.

Justification for the need to investigate job satisfaction is exemplified in the seemingly observed relationship between the level of job dissatisfaction and turnover, absenteeism, and tardiness (Locke, 1976). A report by the Carnegie Forum on Education and the Economy (1986) stated that half the teachers left the profession within seven years (Carnegie Forum on Education and the Economy, in Heller, Clay, & Perkins, 1992). The rate of turnover has been reported as the most consistent measure related to job satisfaction (Padilla-Vellez, 1993). According to Padilla-Vellez, the greatest concern with regard to turnover was associated with the unfavorable conditions which were placed upon an organization. Turnover impacts an organization by: 1) increasing costs related to recruiting, selecting, and training new employees; 2) reducing the morale of employees who remain with the organization; 3) reducing relationships among employees; 4) projecting an unfavorable image to those who remain informed about the organization; 5) interrupting daily activities; and, 6) by diminishing the opportunity for the organization to grow (Mowday, 1984).

Impacts placed upon students of agricultural education are greater than those which are placed among other high school students as a result of agriculture teacher turnover. Agricultural education students in many cases are in agriculture programs for up to four years, where as in an English or Science class, students may have a different teacher each year until graduation. In this regard, opportunities for the agricultural education program to grow, as well as student achievement, may be effected. Mertler (1992) and Heller, Clay, and Perkins (1992) reported that

satisfied teachers were more productive, motivated their students more, and increased student achievement. Based upon the impacts of turnover rate and the findings of Mertler (1992) and Heller et al. (1992), the ultimate effect for agriculture teachers becomes critically important, given their responsibility to provide effective and stable instruction to youth enrolled in agricultural education programs.

Several studies regarding the level of job satisfaction among agriculture teachers have been conducted by researchers at Ohio State University (Newcomb, Betts, & Cano, 1987; Cano & Miller, 1992; and Castillo, Cano, & Conklin, 1997). Cano and Miller (1992) and Castillo et al. (1997), in addition to investigating levels of job satisfaction, investigated demographic characteristics along with a gender analysis of the data. However, the problem exists that simultaneous comparisons of the data have not been conducted to extract similarities and dissimilarities over a period of time.

Purpose And Objectives

The purpose of this paper was to report similarities and dissimilarities of the job satisfaction studies conducted by Newcomb, Betts, and Cano (1987), Cano and Miller (1992), and Castillo, Cano, and Conklin (1997). The following research objectives were formulated to guide the paper:

1. Describe selected demographic characteristics of secondary agriculture teachers in the Newcomb et al. (1987), Cano and Miller (1992), and Castillo et al. (1997) studies.
2. Describe relationships between secondary agriculture teachers' level of job satisfaction and selected demographic variables in the Cano and Miller (1992) and Castillo et al. (1997) studies.
3. Describe the overall level of job satisfaction in

the Newcomb et al. (1987), Cano and Miller (1992), and Castillo et al. (1997) studies.

4. Describe the job satisfying and job dissatisfying factors in the Cano and Miller (1992) and Castillo et al. (1997) study.
5. Describe relationships between selected job satisfying factors (achievement, advancement, recognition, responsibility and the work itself) and the overall job satisfaction of secondary agriculture teachers by gender in the Cano and Miller (1992) and Castillo et al. (1997) studies.
6. Describe the relationships between selected job dissatisfying factors (interpersonal relations, policy and administration, salary, supervision, and working conditions) and the overall job satisfaction of secondary agriculture teachers by gender in the Cano and Miller (1992) and Castillo et al. (1997) studies.

Methods And Procedures

Research Design

The studies (Newcomb, Betts, & Cano, 1987; Cano & Miller, 1992; Castillo, Cano, & Conklin, 1997) included in this paper were all reported as being descriptive correlational.

Population and Sample

The population for the Newcomb, Betts, and Cano (1987) study consisted of 544 agriculture teachers in Ohio ($N=544$). The sample consisted of a random sample of the male agriculture teachers ($N=538, n=366$). A census of female production agriculture teachers ($N=6, n=6$) was conducted. Cochran's (1977) formula for a five percent margin of error was used to determine sample size.

The population for the Cano and Miller (1992) study consisted of 558 agriculture teachers in Ohio ($N=558$). The sample consisted of a

random sample of male agriculture teachers ($N=513, n=369$) and a census of female agriculture teachers ($N=45, n=45$). Cochran's (1977) formula for a five percent margin of error was used to determine sample size.

The population for the Castillo, Cano, and Conklin (1997) study consisted of all secondary teachers of agricultural education in Ohio ($N=534$). The sample consisted of a random sample of male agriculture teachers ($N=453, n=212$) and a census of female agriculture teachers ($N=81, n=81$). The Krejcie and Morgan (1970) formula for determining sample size was used for a five percent margin of error.

Instrumentation

The Brayfield-Rothe "Job-Satisfaction Index," as modified by Warner (1973), was used to measure job satisfaction when all facets of the job were considered in each of the studies (Newcomb, Betts, & Cano, 1987; Cano & Miller, 1992; Castillo, Cano, & Conklin, 1997). Content and face validity for the Job Satisfaction Index in each of the studies was established by a panel of experts consisting of teacher educators and graduate students. Reliability for the Brayfield-Rothe Job Satisfaction Index via the Cronbach alpha procedure was .90, .94, and .90 respectively in the Newcomb, et al. (1987), Cano and Miller (1992), and Castillo, et al. (1997) studies.

Wood's (1973) instrument was used to assess the level of job satisfaction with regard to job satisfying and dissatisfying factors in the Cano and Miller (1992) and Castillo et al. (1997) studies. Content and face validity for Wood's instrument were established by a panel of experts consisting of teacher educators and graduate students. Overall reliability coefficients of Wood's instrument via Cronbach's alpha were .89 and .92 respectively, in the Cano and Miller (1992) and Castillo et al. (1997) studies. Coefficients for the ten sub-scales in the Cano and Miller (1992) and Castillo et al. (1997) studies were: achievement

.86, .81; advancement .89, .66; recognition .93, .84; responsibility .88, .62; work itself .68, .54; supervision .96, .90; salary .94, .93; interpersonal relations .91, .55; policy and administration .95, .84; and working conditions .90, .92 respectively. The Newcomb et al. study did not collect data regarding job satisfying and dissatisfying factors. Therefore, comparisons including the Newcomb et al. study will only be conducted with regard to demographic characteristics of respondents and the overall level of job satisfaction.

Data Collection

The data for each respective study were collected by mailed questionnaire. Response rates were 87, 81, and 80 percent respectively in the Newcomb, Betts, and Cano (1987), Cano and Miller (1992), and Castillo, Cano, and Conklin (1997) studies.

Analysis of Data

All data were analyzed using the Statistical Package for the Social Sciences, Personal Computer version (SPSS/PC+). Appropriate statistical procedures for description and inference were used. The alpha level was set *a priori* at .05 in the Newcomb, Betts, and Cano (1987), Cano and Miller (1992), and the Castillo, Cano, and Conklin (1997) studies. All correlation coefficients were interpreted utilizing Davis' (1971) descriptors.

Results / Findings

The majority of respondents in each study had attained a bachelor's degree or higher. The mean age for teachers in the Newcomb, Betts, & Cano (1987) study was 38 (Table 1). There was no report of mean ages by gender in the Newcomb et al. (1987) study. The mean age for female teachers in the Cano and Miller (1992) study was 32.4 years while the mean age for males was 40.3. The mean age for female teachers in the Castillo et al. (1997) study was 33.2 while the mean age for

males was 42.3. In the Cano and Miller (1992) and Castillo et al. (1997) studies, female agriculture teachers were significantly younger than male teachers ($p < .05$).

Respondents in the Newcomb, Betts, & Cano (1987) study had an average of 11.5 years of teaching experience (Table 1). In the Cano and Miller study (1992) female teachers, on average, had 7.9 years of teaching experience, while males had 13.5. Castillo, Cano, & Conklin (1997) reported an average of 7.9 years of teaching experience for females and 16 for males. Cano and Miller (1992) and Castillo et al. (1997) reported females as having significantly less years of teaching experience than males ($p < .05$). Newcomb et al. (1987) did not report an average number of years in current teaching position for the 1987 study. Regarding the number of years the respondents had been in their current position, females provided a mean response of 6.0 years while males averaged 10.4 in the Cano and Miller study (1992). Castillo et al. (1997) reported female teachers as being in their current teaching position for 6.5 years and male teachers 13.0 years. Cano and Miller (1992) and Castillo et al. (1997) reported females as being in their current teaching positions significantly less than males ($p < .05$).

Correlations were calculated to describe the relationships between agriculture teachers' level of job satisfaction and selected demographic variables. The coefficients ranged in magnitude from negligible to moderate in the Cano and Miller (1992) study. The coefficients for females were (Table 2): age, -.19; years in current position, -.30; total years teaching, -.27; degree status, .38; and tenure status, .43. Coefficients for males were (Table 2): age, .01; years in current position, -.03; total years teaching, -.03; degree status, .07; and tenure status, .01. The correlation between overall job satisfaction and tenure status was significant for females ($p < .05$). In the Castillo, Cano, and Conklin (1997) study, correlations between agriculture teachers' level of job satisfaction and

selected demographic variables ranged in magnitude from negligible to low. Coefficients for females were (Table 2): age, -.06; years in current position, .01; total years teaching, .01; degree status, -.12; and tenure status, .02. Coefficients for males were (Table 2): age, .04; years in current

position, .03; total years teaching, .07; degree status, -.07; and tenure status, -.01. There were no significant relationships between job satisfaction and selected demographic variables for female or male teachers.

Table 1. Means and Standard Deviations for Selected Demographic Variables

Variable	1987 (n=322)		1992			1997				
	M	SD	Female (n=37)		Male (n=299)	Female (n=60)		Male (n=171)		
			M	SD		M	SD	M	SD	
Age	38.0		32.4	6.31	40.3	9.28	33.2	9.07	42.3	9.27
Total Years Teaching	11.5		7.9	4.27	13.5	7.39	7.9	7.0	16.0	9.02
Years In Current Position	-----		6.0	4.06	10.4	6.74	6.5	6.23	13.0	8.68

Table 2. Relationship Between Overall Job Satisfaction and Selected Demographic Variables

Variable	1992		1997	
	Females (n=35)	Males (n=263)	Females (n=60)	Males (n=171)
	r	r	r	r
Age	-.19	.01	-.06	.04
Years in Current Position	-.30	-.03	.01	.03
Total Years Teaching	-.27	-.03	.01	.07
Degree Status	.38	.07	-.12	-.07
Tenure Status	.43*	.01	.02	-.01

Based on a five point Likert type scale with responses ranging from strongly disagree (1) to strongly agree (5), respondents in the Newcomb, Betts, and Cano (1987) provided a mean score of 4.14 on the overall job satisfaction scale (Table 3). In the Cano and Miller (1992) study, using the same scale, females provided a mean score of 2.82, while males provided a mean score of 2.80

(Table 3). Female respondents in the Castillo, Cano, and Conklin (1997) study provided a mean score of 4.03 while males provided a mean score of 3.92 (Table 3). The mean scores for female and male teachers on the overall job satisfaction scales in the Cano and Miller (1992) and Castillo et al. (1997) studies were not significantly different.

Table 3. Means and Standard Deviations for Overall Job Satisfaction

Variable	1987	1992				1997			
	(n=322) M	Female (n=36) M	Female (n=36) SD	Male (n=288) M	Male (n=288) SD	Female (n=60) M	Female (n=60) SD	Male (n= 166) M	Male (n= 166) SD
Overall Job Satisfaction	4.14	2.82	.16	2.80	.20	4.03	.39	3.92	.43

Note. Based Upon Scale: 1=Strongly disagree; 2=Disagree; 3=Undecided; 4=Agree; 5=Strongly Agree

The Newcomb, Betts, and Cano (1987) study did not investigate job satisfying and dissatisfying factors. Based on a six point Likert type scale with responses ranging from very dissatisfied (1) to very satisfied (6) females provided the following mean scores on the job satisfying and dissatisfying factors in the Cano and Miller (1992) study (Table 4): achievement, 4.34; advancement, 4.04; recognition, 4.08; responsibility, 4.59; the work itself, 4.61; interpersonal relationships, 4.78; policy and administration, 3.85; salary, 4.24; supervision/technical, 3.76; and working conditions, 4.21. Using the same scale, males provided the following mean scores (Table 4): achievement, 4.50; advancement, 4.20; recognition, 4.35; responsibility, 4.70; the work itself, 4.65; interpersonal relationships, 4.91; policy and administration, 4.12; salary, 4.10; supervision/technical, 4.11, and working conditions, 4.08 (Table 4). Female and male teachers did not differ significantly on any of the job satisfying or dissatisfying factors. The Castillo, Cano, and Conklin (1997) study utilized the same Likert type scale and reported the following mean scores for females (Table 4): achievement, 4.40; advancement, 3.88; recognition, 4.10; responsibility, 4.54; the work itself, 5.05; interpersonal relationships, 4.51; policy and administration, 3.69; salary, 4.06; supervision/technical, 3.80; and working conditions, 3.79. Mean scores for males were: achievement, 4.45; advancement, 4.21; recognition, 4.25; responsibility, 4.60; the work itself, 4.84; interpersonal relationships, 4.78; policy and administration, 3.98; salary, 4.20; supervision/technical, 4.11, and working

conditions, 4.00 (Table 4). Significant differences ($p < .05$) were obtained between female and male teachers on advancement (job satisfier) and interpersonal relationships (job dissatisfier) (Table 4).

Correlations were calculated to describe the relationships between the teachers' overall level of job satisfaction and job satisfying factors. The coefficients for females in the Cano and Miller (1997) study were (Table 5): achievement, .05; advancement, .25; recognition, .22; responsibility, .05; and the work itself, .26. The coefficients for males were (Table 5): achievement, .07; advancement, .05; recognition, .03; responsibility, .05; and the work itself, .07. None of the job satisfying factors were significantly correlated with overall job satisfaction. Coefficients in the Castillo, Cano, and Conklin (1997) study for females were (Table 5): achievement, .55; advancement, .47; recognition, .37; responsibility, .20; and the work itself, .27. The coefficients for males were (Table 5): achievement, .01; advancement, .06; recognition, .10; responsibility, .10; and the work itself, .01. Achievement, advancement, recognition, and the work itself were significantly related to overall job satisfaction for female teachers ($p < .05$). There were no significant relationships between job satisfying factors and overall job satisfaction for male teachers.

Correlations were calculated to describe the relationships between the teachers' overall level of job satisfaction and job dissatisfying factors. The coefficients for females in the Cano and Miller (1992) study were (Table 6):

Table 4. Means and Standard Deviations for Job Satisfying and Job Dissatisfying Factors

Variable	1992				1997			
	Females (n=37)		Males (n=299)		Females (n=60)		Males (n=171)	
	<u>M</u>	SD	<u>M</u>	SD	<u>M</u>	SD	<u>M</u>	SD
<u>Job Satisfiers</u>								
Achievement	4.34	.74	4.50	.73	4.40	.65	4.45	.59
Advancement	4.04	.93	4.20	.88	3.88	1.00	4.21	.89
Recognition	4.08	1.04	4.35	1.02	4.10	1.23	4.25	1.00
Responsibility	4.59	.76	4.70	.85	4.54	1.47	4.60	1.09
The Work Itself	4.61	.89	4.65	.87	5.05	1.84	4.84	.73
<u>Job Dissatisfiers</u>								
Interpersonal Relationships	4.78	.56	4.91	.67	4.51	.80	4.78	.67
Policy/Administration	3.85	1.01	4.12	1.06	3.69	1.10	3.98	1.00
Salary	4.24	1.21	4.10	1.23	4.06	1.04	4.20	1.35
Supervision/Technical	3.76	1.34	4.11	1.25	3.80	1.75	4.11	1.19
Working Conditions	4.21	.81	4.08	.90	3.79	1.06	4.00	.93

Note. Based upon scale: 1=very dissatisfied; 2=somewhat dissatisfied; 3=slightly dissatisfied; 4=slightly satisfied; 5=somewhat satisfied; 6=very satisfied

Table 5. Relationship Between Overall Job Satisfaction and Job Satisfying Factors

Variable	1992		1997	
	Females (n=35)	Males (n=263)	Females (n=60)	Males (n=171)
Achievement	.05	.07	.55*	.01
Advancement	.25	.05	.47*	.06
Recognition	.22	.03	.37*	.10
Responsibility	.05	.05	.20	.10
The Work Itself	.26	.07	.27*	.01

*p<.05

relationships, .21; policy, .25; salary, .33; supervision, .14; and working conditions, .17. Coefficients for the males were (Table 6): relationships, -.02; policy, .03; salary, .12; supervision, .01; and working conditions, .02. None of the job dissatisfying factors were significantly correlated with overall job satisfaction in the Cano and Miller (1992) study. In the

Castillo, Cano, and Conklin (1997) study, coefficients for females were (Table 6): relationships, .31; policy, .46; salary, .39; supervision, .31; and working conditions, .30. Coefficients for males were (Table 6): relationships, .03; policy, .10; salary, .14; supervision, .14, and working conditions, .12.

Table 6. Relationship Between Overall Job Satisfaction and Job Dissatisfying Factors

Variable	1992		1997	
	Females (n=35)	Males (n=263)	Females (n=60)	Males (n=171)
Relationships	.21	-.02	.31*	.03
Policy	.25	.03	.46*	.10
Salary	.33	.12	.39*	.14
Supervision	.14	.01	.31*	.14
Working Conditions	.17	.02	.30*	.12

*p<.05

All of the job dissatisfying factors were significantly related with overall job satisfaction for the female teachers in the Castillo et al. (1997) study (p<.05). There were no significant relationships between job dissatisfying factors and overall job satisfaction for male teachers.

Conclusions, Implications, And Recommendations

In the last ten years there was a substantial increase in the number of female agriculture teachers, while in the same time period, a decrease was noted in the overall number of teachers of agriculture in Ohio. Males continued to be significantly older than the female teachers. Furthermore, the male teachers, on average, had double the years of teaching experience and years in current position than the female teachers. The findings implied that recruitment efforts targeting females to enter the agricultural teaching profession in Ohio were effective. In addition, the findings implied that because male teachers tended to be older, it was expected that the years of teaching experience be greater for the male teachers than for the female teachers. The data further implied that female teachers tended to leave the profession at a faster rate than the male teachers. In addition, it appeared that the male teachers remained in the same school for longer periods of time, implying that a greater emphasis

was made by the male teachers to integrate into the local community. It is therefore recommended that the recruitment efforts targeting females to enter into the agriculture teaching profession continue. Furthermore, community-based orientation programs should be implemented to assist new teachers, especially females, to integrate into the community. Finally, more research is needed to determine why females tend to leave the agriculture teaching profession at a greater rate than male teachers, paying particular attention to the job dissatisfying variables.

Over the past ten years teachers' demographic characteristics (age, years in current position, total years teaching, degree status, and tenure status) were not significantly related to the overall level of job satisfaction. Although the correlation coefficients were stronger in 1992 than 1998, there were no significant findings (except for the relationship between tenure status and females in 1992). The findings implied that older or younger teachers were not necessarily more or less satisfied with their jobs. A further implication was that the longer a teacher remained in the teaching profession, their level of overall job satisfaction was not effected. Although the demographic variables were not related to the overall level of job satisfaction, the researchers recommend that demographic variables remain an objective of further job satisfaction studies because

the demographic variables provide a description of the population being investigated. Furthermore, as efforts are made to increase the number and tenure of female teachers of agriculture, subsequent relational studies may discover changes in the relationship between the overall level of job satisfaction and the demographic variables.

The lowest level of job satisfaction occurred in 1992. Female and male teachers of agriculture have remained satisfied with their jobs over the past ten years when considering all facets of the job. If the purported findings by Mertler (1992) and Heller, Clay, and Perkins (1992), that satisfied teachers were more productive, motivated their students more, and increased student achievement are true, then it could be implied that because the teachers of agriculture are satisfied with their jobs, students enrolled in the agricultural education programs in Ohio have been motivated and have accomplished greater levels of achievement. This implication was further supported by Heller, Clay, and Perkins (1992) who wrote that teachers were motivated by achieving success in the classroom. Heller et al. added that teachers had a need to facilitate the academic needs of their students, and received their greatest satisfaction by doing so. However, the relationship between level of motivation and achievement of agricultural education students and their teacher's level of job satisfaction has not been explored. Therefore, the researchers recommend that the relationship between students' level of motivation and achievement and the agriculture teacher's level of job satisfaction be investigated.

Related to the job satisfying factors (achievement, advancement, recognition, responsibility, and the work itself), it was concluded that the Ohio teachers of agriculture remained slightly to somewhat satisfied. Female teachers consistently had lower mean scores than their male counterparts. Furthermore, it was concluded that in 1997, there was a significant difference between male and female teachers on advancement (job satisfier). The data implied that

female teachers may perceive opportunities for advancement as being minimal, compared to the male teachers.

With regard to the job dissatisfying factors (interpersonal relationships, policy/administration, salary, supervision/technical, and working conditions) the same teachers were slightly dissatisfied to slightly satisfied. Again, female teachers consistently reported lower mean scores than their male counterparts. Furthermore, it was implied by the data that female teachers were less satisfied with the job dissatisfying factors, especially the factors dealing with policy and administration, supervision, and the working conditions. Could it be that there are some unintended biases placed on female teachers brought upon administrators and/or supervisors? Toward this end, respondents consistently reported, through written comments, that principals and school boards were uninformed and incapable.

It is therefore recommended that some of the bureaucracies of the job, such as the supervision and policies adopted by local educational agencies, be reconsidered for biases and amended as needed. In addition, the Agricultural Education Division of the State Department of Education should initiate educational sessions for school administrators at all levels to inform them of the duties and responsibilities of the local agricultural education programs. It is also recommended that the opportunities for advancement be reviewed and made gender equitable where necessary.

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