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## **Evidence of Women Winemakers' Success in a Male-Dominated Field**

Lucia Albino Gilbert, Ph.D.

John Carl Gilbert, Ph.D.

Department of Psychology

Department of Chemistry & Biochemistry

Santa Clara University, Santa Clara, CA 95053

### **Abstract**

*In a previous study we reported that California women winemakers are purported to be far more numerous than their actual number shows. A factor that may contribute to this misperception is investigated in the current study. Using data from Opus Vino, a major work authored by wine critics and writers, the current study provides support for the hypothesis that the wines produced from California wineries having women winemakers are more highly acclaimed proportional to their presence in the field than are those having male winemakers.*

### **Purpose**

It has been widely touted that women winemakers in California are shattering the glass ceiling in an industry historically dominated by men. However, a study using a comprehensive database to assess the proportion of women and men who are winemakers in California's wineries found that only 9.9% of California wineries have a woman as their lead winemaker (Gilbert, 2011). A factor that may contribute to this misperception between the assumed and actual number of California women winemakers is investigated in the current study.

### **Theoretical Underpinnings and Hypothesis**

Although approximately half of the graduates of premier enology programs in California are women, a much smaller percentage of them become winemakers. This results in women winemakers being a more highly selected group than their male peers in what remains a male-dominated industry. Clearly, the career paths for *both* female and male winemakers are challenging and demanding, but the fact that the field remains male dominated presents

additional challenges to women who wish to achieve this goal (Catalyst, 2012).

Studies of women who persist and achieve in male-dominated fields indicate that their successful pursuits are related not only to high achievement motivation, ability, and self-efficacy (Greenhaus & Callanan, 2006; Gutek & Larwood, 1987) but also to performing better under working conditions of challenge, collaboration, and autonomy (Eagly & Carli, 2007) and doing better at managing risk (Barber & Odean, 2001). These are all factors associated with the uncertainties and challenges of winemaking (Heimoff, 2008). In addition, women in male-dominated fields often need to be more talented and hard working than their male peers in order to be recognized as successful (Matasar, 2006).

For these reasons, we investigated the hypothesis that although wineries with women winemakers are far fewer in number than those with their male counterparts, their wines may be disproportionately more highly acclaimed, and that this factor may contribute to the significant discrepancy between the perceived percentage of women winemakers and the actual figure. Several contextual variables that might help illuminate factors associated with women winemakers success in a male-dominated field were also included in the study. These variables specifically were the California wine regions in which these wineries were located, whether the winemakers were also winery owners, and the winery's case production. Although no hypotheses were made with regard to the contextual variables, we expected that including them could provide a more nuanced understanding of our hypothesized finding, should it be supported by the data.

## **Method**

Two sources of data were used to test the hypothesis that, proportional to the representation of women in the field, the wines produced at wineries having women winemakers are more highly acclaimed than those having male winemakers.

### **Sources of Data**

One data source was the California winery comprehensive database developed for our first study (Gilbert, 2011). In this study, which used the official list of 3200+ wineries in California available from *Wines & Vines*, we gathered information from winery websites and from telephone calls and visits to wineries so as to identify whether a winery's lead winemaker was a woman or a man or a female-male co-winemaking team. Wineries for which

we could not identify the winemaker (3.2%) were omitted from the comprehensive database. Also omitted in analyses using this database were the wineries that had female-male co-winemaking teams (2.5%); in nearly all these cases, the co-winemakers represented spousal pairs. The results of our first study indicated that only 9.9% of California wineries have a woman as their lead winemaker, with the percentages being highest in the Sonoma/Marin and Napa wine regions, 12.4% and 12.2%, respectively, and lowest in the Sierra Foothills and Southern California wine regions, 7% and 4%, respectively.

The second data source was *evidence of winery quality*, which was obtained by using the listing of wineries from *Opus Vino* (2010). *Opus Vino* includes a total of some 4000 wineries throughout the world that were identified by leading wine critics and wine writers, who worked as a team with the volume's editor-in-chief. The editor-in-chief, Jim Gordon, is former managing editor of the *Wine Spectator* and current editor of *Wines & Vines Magazine*. Selections for *Opus Vino* were based on an accumulation of experiences with wineries in a particular wine region and tasting notes of wines from that region over a period of years. For each major wine region, both top-quality established wineries and "rising star" wineries were identified.

Criteria provided in *Opus Vino* for the category of top-quality established winery included: making wines of very high or outstanding quality; having a long track record for quality, relative to its region; being a leader in its region in grape-growing and/or winemaking techniques; and performing particularly well in a special wine category. Criteria for the category of rising star winery included: making wine of very high or outstanding quality, showing potential to be tomorrow's classic winery, and having been innovative in choice of variety, grape-growing, and/or winemaking techniques.

The California wineries included in *Opus Vino* are a subset of the wineries in the California winery comprehensive database developed for the first study (Gilbert, 2011). In preparing the data for the current study, we coded (1) whether wineries in our database were listed in *Opus Vino* (yes or no) and (2) the sex of the winemaker (female, male, or female-male co-winemaking team) cited in the entry for the winery in *Opus Vino*. In those cases in which no specific winemaker was mentioned, we researched who was the winemaker at the time described in the entry. All the California wineries listed in *Opus Vino* were in our comprehensive database, and we were able to code the sex of the winemaker in all cases. The

wineries having female-male co-winemaking teams were again omitted from our data analysis.

### **Other Descriptive Variables**

For both data sources, we identified each winery's region and case production. Six wine regions were used: Central Coast, Inland California (Central Valley and Sierra Foothills), Mendocino/Lake County, Napa, Sonoma/Marin, and Southern California. The case production of the winery was coded into the five ranges provided by *Wines & Vines*. These ranges extended from less than 1000 cases to more than 500,000 cases per year. In addition, we coded whether the lead winemaker was also a winery owner. For each lead winemaker in the database, Winemaker/Owner was coded yes or no.

## **Results**

Chi-square analysis was used to test the study's hypothesis. We also used chi-square analyses in making comparisons regarding the other winery variables included in the study. In particular, we were interested in describing the wineries included in *Opus Vino* with regard to California wine region, winery production range/size, and whether the main winemaker was also a winery owner.

### **Test of Study's Hypothesis**

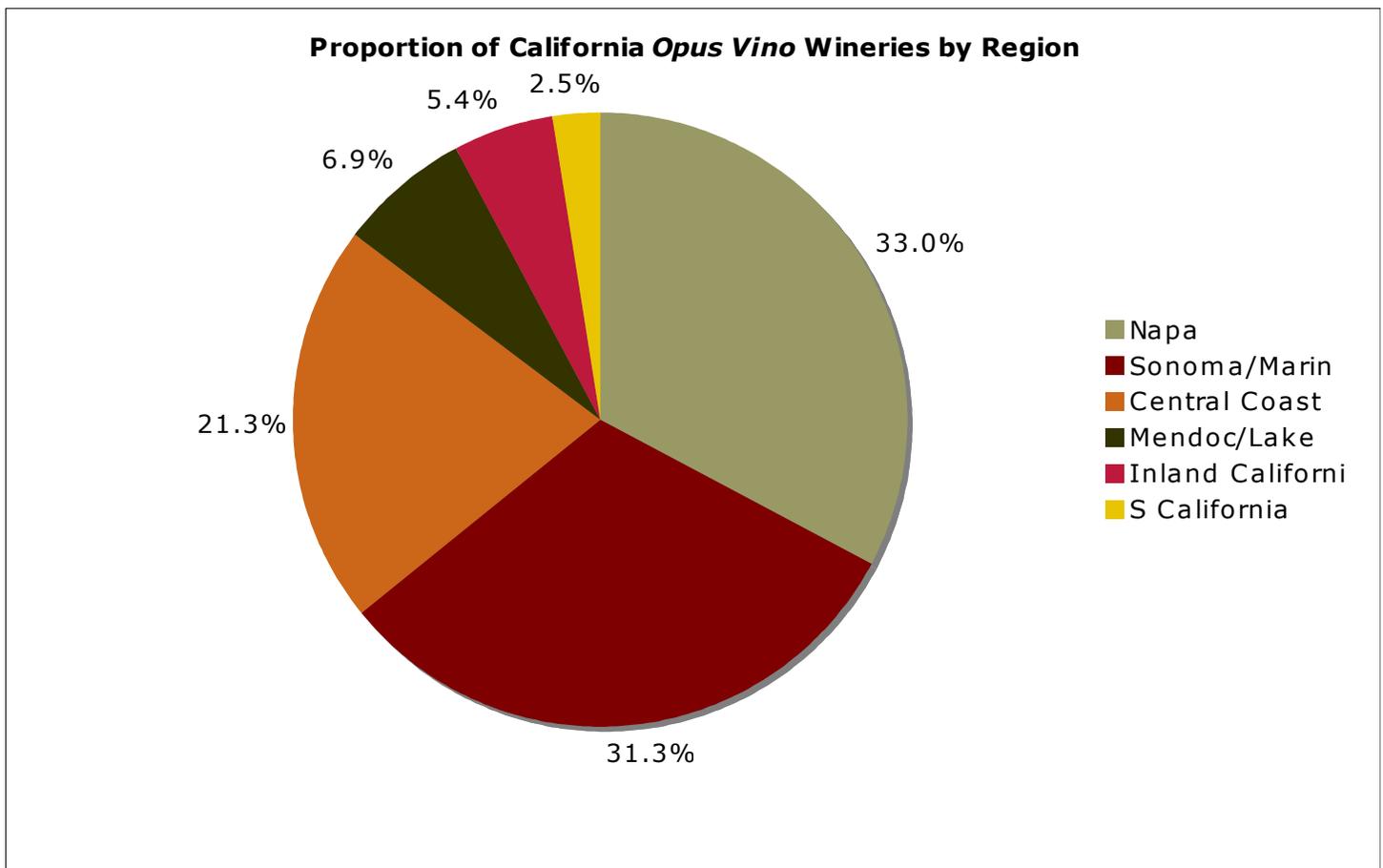
As evidenced by inclusion in *Opus Vino*, and based on their proportional representation in the field, we hypothesized that the wines produced from wineries having lead winemakers who were women would be more highly acclaimed than those having lead winemakers who were men.

We found that proportional to their representation in the comprehensive database of 3020 winemakers (i.e., 9.8% women, 90.2% men), 23% of wineries with women lead winemakers were listed in *Opus Vino* compared to 14.1% of wineries with male lead winemakers (also see bar graph below). The chi-square analysis performed was statistically significant,  $\chi^2(1, N = 3020) = 14.99, p < .001$ , thereby supporting the main hypothesis of the study regarding California women winemakers being more highly acclaimed.

### **Other Analyses**

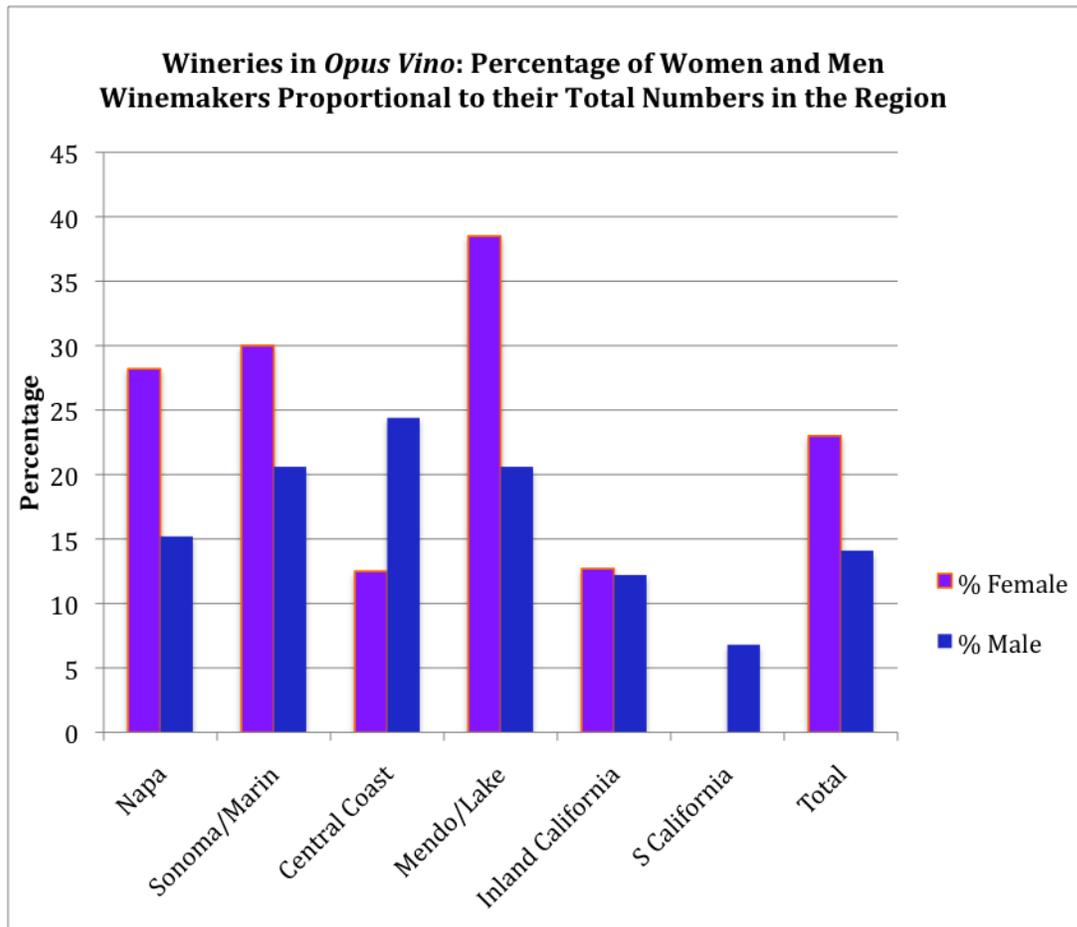
The next set of data summaries and analyses provides further description of the wineries included in *Opus Vino*.

*California Wine Region:* The number of California wineries from each region included in *Opus Vino* quite closely paralleled their total number in the various wine regions in the comprehensive data base of California wineries (Gilbert, 2011). As can be seen from the pie chart below, of the 450 wineries with a woman or male winemaker that were included in *Opus Vino*, 33% were located in Napa and 31.3% in Sonoma/Marin, followed by 21.3% in Central Coast, 6.9% in Mendocino/Lake Counties, 5.4% in Inland California, and 2.5% in Southern California.



Although the *subset* of wineries from the various wine regions included in *Opus Vino* closely paralleled their total number in these wine regions, the *proportion* of wineries in *Opus Vino* having women winemakers varied considerably across the regions. As can be seen from the bar graph below, although Mendocino/Lake Counties comprises a relatively small wine region, both in the larger California winery comprehensive database (5%) and among those

included in *Opus Vino* (6.9%), 38.5% of the lead women winemakers in this region were included in *Opus Vino*, as compared to 20.6% of the lead men winemakers. For Napa and Sonoma/Marin, the percentages were 28.2% and 30.0%, respectively, for women winemakers included in *Opus Vino* compared to 15.2% and 20.6%, respectively, for men winemakers.



For the remaining wine regions, the percentages for women and men were quite comparable for Inland California and higher for men in the Central Coast; no wineries with women winemakers were included in *Opus Vino* for Southern California. Thus wine region seems to be a factor in understanding the proportion of wineries with women winemakers identified in *Opus Vino* as top or rising star wineries.

*Production range.* The California wineries listed in *Opus Vino* included wineries in all the production ranges used by *Wines & Vines*, with 51% of the wineries falling into the 5,000–49,999 case range, and 25% in the 1,000–4,999 case range. Proportional to their

representation in the field, *Opus Vino* wineries with women and men winemakers did not differ with regard to the production range of the wineries. This was also the case for those wineries in the California winery comprehensive database. Production range, then, did *not* seem to be an illuminating factor.

*Winemaker/Owner.* In the California winery comprehensive database, a significantly larger proportion of men than women were winemakers and also owners of their wineries, ( $\chi^2$  (1, N=3018) = 19.92,  $p < .001$ ). Among the wineries with women winemakers, 39% were both owners and winemakers; among those with men winemakers the figure was 52%. The percentages for those wineries included in *Opus Vino* paralleled those for all California wineries—of the wineries with women winemakers, 28% were a winemaker/owner and of the wineries with men winemakers, 40% were a winemaker/owner, ( $\chi^2$  (1, N=450) = 3.11,  $p < .07$ ). Thus, more men winemakers are also winery owners than are women.

A reversal to the pattern of more men than women owner/winemakers occurred when we considered winemaker/owners in *Opus Vino* proportional to the respective number of owner/winemakers in the field. When we compared the number of women and men owner/winemakers listed in *Opus Vino* to their respective numbers as owners/winemakers in the California winery comprehensive database, we found that 14.2% of women owners/winemakers were included in *Opus Vino* in comparison to 9.7% of men owners/winemakers, ( $\chi^2$  (1, N=1706) = 2.79,  $p < .09$ ). These findings indicate that although men who are winemaker/owners are far more numerous among California wineries, a higher percentage of women owners/winemakers, proportional to their presence in the field, were among those wineries included in *Opus Vino*.

### Discussion

The results provide strong support for our hypothesis. Proportional to their representation in the field, the wines from California wineries having lead women winemakers are more highly acclaimed in comparison to those of their male counterparts, as evidenced by their inclusion in *Opus Vino*, a widely cited and credible source of winery quality. Having their wines more highly acclaimed provides a clear indicator that women winemakers have “made it” and are being recognized in a male-dominated industry.

At the same time, it may also lead to the conclusion that women winemakers are far more numerous than they in fact are, and to the belief that women winemakers in California have shattered the glass ceiling. The findings from Napa and Sonoma present a case in point. In both of these regions, only about 12% of wineries have a lead women winemaker (Gilbert, 2011); yet for both regions, the wineries selected for inclusion in *Opus Vino* reflected far more women winemakers proportional to their presence in the field (about 30%) than for male winemakers (15 to 20%). This was even more pronounced for Mendocino/Lake Counties, where only 9% of wineries have a lead woman winemaker, yet the wineries listed in *Opus Vino* included far more women winemakers proportional to their presence in the field (38.5%).

Why would the wineries with women winemakers be more highly acclaimed proportional to their presence in some wine regions than in others? This is a complicated question that is likely related to factors beyond the scope of our study. Our data indicated that winery size was not a contributing factor. However, winery ownership may have some importance. Although a relatively small percentage of California women winemakers are also winery owners, among the wineries included in *Opus Vino*, disproportionately more California women owner/winemakers were included than men owner/winemakers. Nearly all the wineries having women owner/winemakers in *Opus Vino* were located in the Mendocino/Lake, Napa, and Sonoma wine regions.

Finally, this study concerns California women winemakers' progress in a male-dominated field. It used the criteria for winery quality provided by the team of wine critics and writers working with the editor-in-chief of *Opus Vino*. By using such a team, this data source provided a broad-based assessment of quality that was less dependent on the ratings of a single person or publication. The wineries included in *Opus Vino* were quite representative of the wineries in the California comprehensive database with regard to wine region, whether winemakers were also winery owners, and winery case production. Had one used other expert sources for winery quality, a different set of wineries may have been identified.

### **Conclusions**

In conclusion, our findings help illuminate two important areas. First, they give strong evidence of California women winemakers' substantial and considerable success in a male-

dominated field. Their reputation as serious contributors to the field of winemaking is clearly supported by our results. Second, our findings provide a credible explanation for why many people erroneously believe that women winemakers have shattered the glass ceiling in California.

Many important aspects still need to be investigated in understanding women winemakers' career paths and such factors as persistence, success, and acclaim. These include changing attitudes about women's abilities, what it means to work for a highly successful woman winemaker, and the role that men and other women have played in the mentoring of women winemakers and in providing support for their success in the field.

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Note: Portions of this paper were presented at the Annual Meeting of the Association for Psychological Science, Chicago, IL, May 2012.

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