Food Art Does Not Reflect Reality: A Quantitative Content Analysis of Meals in Popular Paintings

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Abstract
Can the frequency with which a food is depicted in paintings give historical insight into family meals over the years and across countries? To initially explore this question, 750 food-related paintings were screened down to 140 paintings from Western Europe and the United States depicting small, family meals. Quantitative content analyses showed the most frequently eaten foods (such as chicken, eggs, and squash) were least frequently depicted in paintings. In contrast, the most aspirational foods such as shellfish were commonly painted in countries with the smallest coastlines (Germany), and more than half (51.4%) of the paintings from the seafaring Netherlands contained non-indigenous tropical lemons. Moreover, although bread and apples have been commonly available over time, bread has been painted 74% less frequently and apples painted 302% more frequently. In general, paintings tend to feature meals with foods that were either aspirational to the commissioning family, aesthetically pleasing or technically difficult for the painter, or that encoded cultural, religious, or political information for informed viewers. Care should be taken to not project food depictions in paintings as indicative of what was actually served or eaten in that country at the time.

Keywords
food history, art history, family meals, content analysis, food paintings

Introduction
“Art reflects life.” This has been discussed in regard to clothing, agriculture, and social settings (Banning, 1998), but does it also apply to food as depicted in paintings and food consumption across countries and across time? Having the answers to these questions can offer a better understanding of consumption trends along with a better way to interpret the role of food in paintings.

Analyzing historical food consumption trends through quantitative content analysis has yielded unexpected insights in the context of food depictions on magazine covers, recipe sizes (Wansink & Payne, 2009), and incidental word mentions in the New York Times and London Times (Davis & Wansink, 2015). In the context of art, an investigation of portion sizes depicted in representative paintings of the Last Supper showed that the depicted entree size, bread size, and plate size have had steadily risen over the millennium by 23.1%, 69.2%, and 65.6%, respectively (Wansink & Wansink, 2010).

Yet, paintings of the Last Supper, or of large banquets, tell us little about everyday food consumption in homes. For instance, it is not known whether these depictions represent historical accounts or whether they vary across country or across time (Bendiner, 2004). Examining a representative group of the most popular paintings from the most artistically prolific countries in the Western artistic tradition (the Netherlands, France, Italy, Germany, and the United States), this study investigates any such differences across country and across time in a span from roughly 1500 to 2000. These periods are broken down in our study as (a) Era of European Exploration and Colonization (1500-1650), (b) Era of Enlightenment (1651-1850, and (c) Industrial and Post-Industrial Era (1850-2000). The intent is not to draw causality or to suggest why there may be differences across time or countries (De Marchi & Van Miegroet, 2006), nor to draw socio-economic inferences about markets (De Marchi & Van Miegroet, 1998, 1999; Montias, 1982). Rather, this preliminary approach is intended to provide a hitherto overlooked means by which to understand how other factors, such as family aspirational lifestyles as well as painters’ aesthetic interests, might influence the history of how food items are included in paintings (Loughman & Montias, 2000).

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After providing a background overview of the food depictions in Western paintings, we describe a content analysis of 140 paintings from five countries that span 500 years, indexed with the incidence of 104 different foods in these paintings. This quantitative analysis of paintings during the early modern era suggests that art did not depict life. Instead, it appears more likely that foods depicted are linked to people’s identities and viewpoints, as well as cultural, symbolic, and political associations with certain foods, rather than what they literally ate (Nygard, 2015a). Paintings are thus not a simple reflection of reality, but rather complex social constructs that show the preferences and values of the artists who made them and the patrons who in some cases commissioned them (Montias, 1991), as well as market forces at work in their creation and the preferences of buying publics based on the wider availability of foods from global trade with Europe (Hochstrasser, 2007).

Background

Clearly, art reflects economics (De Marchi, 1995; De Marchi & Van Mieghem, 2006), but do food paintings also reflect life during the eras in which they were made? Since art has been an integral element of all cultures and over various historical periods (Marcus & Myers, 1995), it is worth considering the role artists play in setting forth a model of the aspirational and therefore coveted lifestyle of that time. Of course, the reverse could be argued—that the beauty or desirability of certain food items—or the display of the technical mastery required to depict them—could inspire the creation of such masterpieces.

Discussions of this topic are widespread both in academia as well as in the public media. In the article “Is Art Imitating Life?” the authors address human emotion and culture as aspects of life that have ultimately been presented in films (Harris & Domnoyer, 2000). Such feelings appear to be consistent around the world (Nygard, 2012). But visual artists, such as painters, may feel that they choose to paint certain still life items based on their level of challenge to the painter for successful portrayal (Bryson, 2013).

As noted earlier, it was suggested by the largest Last Supper analysis (Wansink & Wansink, 2010) that portion sizes of the main entrée increased by 69.2% over the studied 1,000-year period, and the ratio of the size of bread and the plate increased by 23.1% and 65.6%, respectively. While this was shown to correlate with the economic health of the different countries at different times, this was not suggested as a causal explanation, only as a concurrent trend.

Yet paintings may generally reflect a different view of life because they have other purposes, such as providing an aesthetically pleasing product to the viewer (LeWitt, 1967), representing the wealth of the family who commissioned the painting (White, 1965), making a statement to the public (Lind, 1993), or inspiring a service aspiration (Arneheim, 1986). If a family commissioned an artist’s painting as a wish to demonstrate its wealth to other families, the painting may depict foods that are aspirational, such as exotic fruit or seafood rather than the ordinary game most families consumed at the time (Bendiner, 2004). For the artist, painting a visually challenging food could additionally contribute to the inspiration the artist needs to create a visually pleasing piece. For example, painting a lobster in its complete form may be more challenging and demonstrative of one’s talent than painting beef or pork. Similarly, an exotic pineapple is more pleasing to the eye than a common cucumber.

The cuisine of early modern Europe—1500 to 1800—was a mix of dishes inherited from medieval cuisine combined with innovations that would persist into the modern era. Although there was a great influx of new ideas, an increase in foreign trade, and a scientific revolution, preservation of foods remained traditional: drying, salting and smoking, or pickling in vinegar. The discovery of the New World, the establishment of new trade routes with Asia, and increased foreign influences from sub-Saharan Africa and the Middle East meant that Europeans became familiar with a multitude of new foodstuffs. Spices that had previously been prohibitively expensive luxuries, such as pepper, cinnamon, cloves, nutmeg, and ginger (Grendler, 2004), soon became available to the majority population, and the introduction of new plants and commodities coming from the New World and India like maize, potato, sweet potato, chili pepper, cocoa, vanilla, tomato, coffee, and tea transformed European cuisine forever.

There was a marked increase in prosperity in Europe during this period, which gradually reached all classes and all areas, and it considerably changed the patterns of eating. The idea of the nation state was first conceived in the early modern period, but it was not until the 19th century that the notion of national cuisines emerged. Class differences were far more important dividing lines, and it was almost always upper-class food that was described in recipe collections and cookbooks (Goody, 1982).

For most of Europe, the many varieties of grain were the most important crop and formed the daily staple for segments of society. The differentiation was in variety, quality, and method of preparation. The lower classes ate bread that was coarse and of considerably higher bran content, while the upper classes enjoyed the finely ground, white wheat flour that most modern Europeans are used to. Wheat was considerably more expensive than other grains, and rarely eaten by many. Most bread was made with a mixture of wheat and other grains (Braudel, 1981).

European consumption of meat from 1600 to 1800 remained exceptionally high by world standards, and, during the period, this high level of consumption generally moved down the social scale. But the poor continued to rely mainly on eggs, dairy products, and pulses for protein. Often they did better in the less populated regions, where wild game and fish could still easily be found. The richer nations, particularly England, ate considerably more meat than the poorer nations. Yet in some areas, especially Germany and the
Mediterranean counties, the meat consumption of ordinary people actually began to decline around 1550, probably due to increasing population (Braudel, 1981).

Cuisines in Western countries may appear diverse among themselves but have much in common when compared with cuisines from other parts of the world, such as Asia. Compared with traditional cooking of Asian countries, for example, meat is more prominent and substantial in serving size in Western cuisine. In particular, steak and cutlets are common dishes in the West, and Western cuisines put substantial emphasis on sauces (partly due to the difficulty of seasonings penetrating the larger pieces of meat used in Western cooking). Many dairy products are utilized in the cooking process (except in nouvelle cuisine). Moreover, wheat-flour bread and pasta have long been the most common Western source of starch, although the potato has become a major European starch plant since the colonization of the Americas. In addition, salads (cold dishes with uncooked or cooked vegetables with sauce) are an integral part of European cuisine compared with non-European cultures where food safety concerns necessitate they be prepared with heat (Weichselbaum, Benelam, & Soares Costa, 2009).

**Method**

There would be many ways to choose the sample of paintings for examination in this preliminary quantitative content analysis. The starting point we used was to begin with paintings identified as significant or appropriate for study based on general or popular credibility as illustrated in present-day source materials. To begin drawing a sample of paintings, we consulted the book series *Art and Appetite* (Madsen, Oehler, Roberts, Siegel, & Barter, 2013) and *Food in Painting* (Bendiner, 2004) for the countries France, Italy, Germany, the Netherlands, and the United States (beginning in colonial times). Other books (Aubisse, 2001; Balis, 2002; Benati, Peruzzi, & Baldassari, 2000; Cottino, 2007; Georgel, Jamot, & Sterling, 2006; Rosenberg & Mandrella, 2005; Vollerin, 2011; Wandschneider, 2003), such as *Dutch and Flemish Still-Life Paintings* (Meijer, 2003), were also consulted.

The 750 food paintings originally identified were screened down to those focusing on family meals. After screening out paintings of banquets, feasts, and still lives of food that were decorative and probably not full meals (such as bowls of fruit or game meat hanging on the wall), out of family meals that depicted food, a final total of 140 paintings from the years 1500 to 2000 were collected. Each painting was coded for all of the foods visible in the painting. The paintings were categorized by country as well as time period. The time periods were chosen as a rough representation of different periods in Western history. Paintings created from 1500 to 1650 were categorized as Era of European Exploration and Colonization, paintings from 1651 to 1850 were categorized as Era of Enlightenment, and paintings from 1851 to 2000 were categorized as Industrial and Post-Industrial Era.

In total, 91 food variables were coded for each painting. These variables consisted of items categorized as part of the five basic food groups: fruits, vegetables, dairy, grains, and protein (meat) along with seasonings (salt, sugar, black pepper), and additional items such as almonds, raisins, and walnuts. In addition, the number of place settings was coded since they might eventually be helpful in determining portion-size per person.

Inclusion of a particular food was marked using a dummy variable (1 = depiction in given painting, 0 = no depiction in a painting). Chi-squared analyses of association were conducted for each of the seven large food categories: fruits, vegetables, dairy, grains, meat, seasonings, and indulgences (including sweets, desserts, nuts, etc.). The percentage of food depiction incidence over all the paintings in each country and time period was calculated for each variable.

**Results**

### Which Countries Painted Which Foods?

When comparing how frequently each of five basic food groups was depicted in paintings, we found that vegetables and meats varied widely in frequency of depiction (Table 1). Across years and countries, 19.29% of the paintings included a vegetable, 75.71% contained fruit, 38.57% contained a meat, and 41.43% contained bread. The vegetables with the highest incidence in the total number of paintings were, in descending order, artichoke, tomato, onion, squash, and radish, $\chi^2(4, 2380) = 13.997, p = .007$. Similarly, the meats with the highest incidence in the total number of paintings were shellfish, fish, and ham, $\chi^2(4, 2238) = 24.324, p < .001$. Shellfish, in particular, were depicted in over 22% of all the paintings, and they were most prevalent in Dutch paintings (56.76%) as well as in one fifth of the German paintings (20%). Fish and ham also had the highest incidences in Dutch paintings (13.51% each), although they were not as common as shellfish.

Of the other basic food groups, fruits were much more highly depicted in paintings than vegetables. Across all paintings, 75.71% depicted fruit, whereas only 19.29% depicted vegetables. In particular, lemons were observed in about one third (30.71%) of all paintings, with the highest depictions being in the Netherlands (51.35%), Germany (30.00%), and the United States (29.17%). Grapes followed a similar trend as lemons. Apples were the second most commonly depicted fruit, especially in the United States, with 41.67% incidence. Oranges and pears, however, appeared most prominently in Italian paintings.

Within the dairy category, cheese was most commonly depicted, especially in Italian (4.00%), Dutch (13.51%), and American (12.50%) paintings. Within grains, bread was most commonly depicted (41.43%), and it was most popular in Dutch paintings (62.16%) followed by Italian and German paintings (40.00%). Crackers were only observed in the
United States and France, with America having the highest incidence (12.50%).

The depictions of indulgences and seasonings both varied widely across countries (Table 2). The least common nuts (hazelnuts and chestnuts) had the highest incidence across all countries’ paintings at 10%, and they were most commonly depicted in 25% of the German paintings, $\chi^2(4, 840) = 18.420, p = .001$. Walnuts had the highest incidence in the Netherlands (16.22%) whereas raisins had the highest incidence in the United States and were observed in one quarter of all the country’s paintings (25.00%). Similarly, almonds were also most commonly seen in American paintings (16.67%).

Salt was the most commonly depicted seasoning and appeared most frequently in Dutch (27.03%), German (15.00%), and American (8.33%) paintings, $\chi^2(4, 1817) = 12.690, p = .013$. Sugar appeared only in French, American, and Italian paintings, with the first country having more than 10% more incidence over the other two (14.71% vs. 4.17% vs. 4.00%). Olives appeared only in Dutch paintings (18.92%). Pickles, mustard, and black pepper were seen the most in American paintings with 8.33%, 8.33%, and 4.17% incidence, respectively.

### How Food Depictions Changed Over Time

Across the three periods studied, the depiction of meats and grains varied most significantly (Table 3). Of the various meats depicted in paintings, seafood—shellfish (22.14%) and fish (8.57%)—had the highest overall incidence across the three art periods, $\chi^2(2, 2238) = 9.207, p = .010$. In the Era of European Exploration and Colonization, seafood was depicted in 50% of paintings. The frequency with which shellfish were painted steadily decreased with time, going from 23.40% in the Era of Enlightenment down to 10.53% in the Post-Industrial Era. Sausage and ham were depicted the most in the Era of Enlightenment. Of the grains, bread was frequently depicted in paintings across time (41.43%), but it decreased from 51.06% in the Era of Enlightenment to 17.54% in the Post-Industrial Era, $\chi^2(2, 1258) = 9.938, p = .007$.

Fruits were commonly painted over all time periods. Lemons had the largest depiction across art periods (30.71%),

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**Table 1. How Paintings of Mealtime Foods Are Depicted Differently in Different Countries (by Percentage; 1500-2000 A.D.).**

| Total     | USA    | France   | Germany   | Italy    | The Netherlands | $\chi^2$ |
|-----------|--------|----------|-----------|----------|-----------------|---------|
| (N = 140) | (n = 24) | (n = 34) | (n = 20)  | (n = 25)  | (n = 37)        |         |
| All vegetables | 19.29 | 12.50 | 14.71 | 15.00 | 40.00 | 16.22 | 13.997** |
| Artichokes | 5.00 | 4.17 | 0.00 | 5.00 | 0.00 | 13.51 | 8.786 |
| Onions | 4.29 | 0.00 | 0.00 | 5.00 | 20.00 | 0.00 | 19.328*** |
| Tomatoes | 2.14 | 4.17 | 0.00 | 0.00 | 8.00 | 0.00 | 6.552 |
| Squash | 2.14 | 0.00 | 0.00 | 0.00 | 12.00 | 0.00 | 14.102*** |
| Radishes | 2.14 | 0.00 | 2.94 | 5.00 | 0.00 | 2.70 | 2.010 |
| All fruits | 75.71 | 75.00 | 70.59 | 70.00 | 80.00 | 81.08 | 3.493 |
| Lemons | 30.71 | 29.17 | 20.59 | 30.00 | 16.00 | 51.35 | 11.618** |
| Apples | 27.86 | 41.67 | 35.29 | 25.00 | 36.00 | 8.11 | 11.499* |
| Grapes | 24.29 | 25.00 | 17.65 | 30.00 | 20.00 | 29.73 | 2.023 |
| Oranges | 17.86 | 20.83 | 8.82 | 15.00 | 24.00 | 21.62 | 3.148 |
| Pears | 12.14 | 16.67 | 17.35 | 0.00 | 20.00 | 5.41 | 7.211 |
| All meats | 38.57 | 16.67 | 29.41 | 35.00 | 28.00 | 70.27 | 24.324*** |
| Shellfish | 22.13 | 4.17 | 11.11 | 20.00 | 4.00 | 56.76 | 30.596**** |
| Fish | 8.57 | 0.00 | 11.76 | 10.00 | 4.00 | 13.51 | 4.564 |
| Ham | 7.86 | 4.17 | 11.76 | 0.00 | 4.00 | 13.51 | 5.100 |
| Sausage | 3.57 | 0.00 | 2.94 | 5.00 | 12.00 | 0.00 | 7.574 |
| Chicken | 1.43 | 0.00 | 0.00 | 0.00 | 4.00 | 2.70 | 2.731 |
| Steak | 1.43 | 4.17 | 0.00 | 0.00 | 4.00 | 0.00 | 3.771 |
| All dairy | 20.71 | 29.17 | 14.71 | 25.00 | 24.00 | 16.22 | 2.752 |
| Cheese | 12.14 | 12.50 | 5.88 | 5.00 | 24.00 | 13.51 | 5.568 |
| Butter | 5.00 | 4.17 | 0.00 | 15.00 | 0.00 | 8.11 | 8.103 |
| Eggs | 1.43 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 | 12.174*** |
| All grains | 54.29 | 50.00 | 41.18 | 65.00 | 52.00 | 64.86 | 1.869 |
| Bread | 41.43 | 29.17 | 29.41 | 40.00 | 40.00 | 62.16 | 10.103*** |
| Pastries/biscuits | 14.29 | 12.50 | 17.65 | 30.00 | 12.00 | 5.41 | 6.899 |
| Crackers | 2.86 | 12.50 | 2.94 | 0.00 | 0.00 | 0.00 | 10.249** |

Note. “Onions” includes spring onions; “Shellfish” consists of oysters, lobster, crab, shrimp, and crayfish.

*p < .05. **p < .01. ***p < .001 for $\chi^2$ significance.
with their highest incidence in the Era of European Exploration and Colonization (41.67%). Apples were second most frequently depicted across time (27.86%), with their highest depiction in the Post-Industrial Era (42.11%). Grapes (24.29%) and oranges (17.86%) were the next highest in overall depiction, with both fruits having their highest
number of occurrences in the Era of Enlightenment with 25.53% and 23.40% depiction, respectively.

With regard to seasonings and indulgences, both categories had significant values of incidence across the three art periods (Table 4). Uncommon nuts, such as hazelnuts and chestnuts, had the highest overall incidence with its highest incidence during the Era of European Exploration and Colonization (27.28%), \( \chi^2(2, 840) = 15.027, p = .001 \). Interestingly, both uncommon nuts and walnuts were most frequently painted in the Era of European Exploration and Colonization (38.39%). Walnuts and raisins were next highest in depiction, with walnuts most frequently depicted in the Era of European Exploration and Colonization (11.11%) and raisins most commonly depicted in the Era of Enlightenment (8.51%).

Among seasonings, salt was the most popular (11.43%) and was most frequently depicted in the Era of European Exploration and Colonization (19.44%) and decreased across the three art periods, \( \chi^2(2, 1817) = 7.395, p = .025 \). Sugar had an increasing trend in depiction across time with its highest depiction in the Post-Industrial Era (7.02%). Although olives were only shown in 5% of all paintings, during the Era of European Exploration and Colonization, they were depicted in almost 20% of all paintings (19.44%).

One surprising generalization about the depiction frequency of foods is that frequently depicted foods are not frequently eaten foods. The bias of either the artists or the patrons seems to have been in the direction of painting either special or aspirational foods, or aesthetically pleasing foods. Many of the frequently painted foods do not appear to reflect what historians commonly believe to have been eaten in these countries and during these time periods. Instead, these paintings tended to feature meals with either food items that may have been aspirational for the family who commissioned the painting or items that the painter considered would be aesthetically pleasing to the viewer. A further rationale for arrangements of food items not normally consumed by the general populace in a particular period can be a sense of national pride in the types of exotic foods that far-reaching trade networks were able to bring to market (Honig, 1998). Furthermore, as is often the case in 17th-century Dutch paintings, certain foods often had broader symbolic or moral connotations that the artist wished to underscore for a public who understood them. An analysis of such paintings can provide us with a better understanding of the use of art as a historical tool to better understand a given time period or country.

For example, throughout the different art periods analyzed, the chief meat source consumed by middle- to upper-class families was fowl or game such as chicken or quail (Mennell, 1996). However, the majority of the meat appearing in the paintings was shellfish and fish. It is understandable that Dutch paintings featured large amounts of seafood, because more than 50% of the border of the Netherlands is surrounded by water, and the majority of its population lives within 100 km of the sea. But for Germany—a country that has much more limited access to water—it is notable that 30% of its paintings still feature seafood. Although a portion of Germany’s border does adjoin the Black Sea, only 6% of the country borders the sea and only 3% of its population in the era of

### Discussion

This is a first quantitative exploration of how frequently various types of foods have been depicted in paintings of everyday meals throughout history and across selected national schools of painting. Although the majority of common food paintings from these eras include food scenarios for banquets or large social gatherings with feasts, the paintings analyzed in this article were strictly limited to those consisting of meals with table settings for a small single-family unit (four or fewer place settings).
lives within 100 km of the sea. Insofar as art patrons—or even a notable artist himself—may be well traveled, depicting seafood could be a way of showing one’s familiarity with travel or an appreciation for a larger world. An analogous example of this can be found in the European practice of collecting seashells during the 17th and early 18th centuries. One of the goals of this collecting was to come closer to God by furthering knowledge about God’s creation (van de Roemer, 2004); not surprisingly, those rarer items that came from the ocean’s depths were highly prized in this regard, and were therefore collected and depicted in paintings. Similarly, less common food types, such as the shellfish seen in food paintings, may be placed there in part due to a similar sense of wonder about the world. In addition, different shellfish types held multiple, often complex associations that would have been readily understood by viewers. The sensual overtones of oysters, still celebrated as an aphrodisiac today, are not hard to understand, and thus their presence in paintings often hinted at the transitory nature of pleasure or implied a romantic relationship even if no lovers were actually depicted (Cheney, 1987). But while oysters were relatively common in the Dutch Republic, lobsters, which were much harder to come by, stood as symbols of wealth or its fleeting nature. Furthermore, the ability of lobsters to scuttle forward and backward reminded viewers of the instability of life (Philadelphia Museum of Art, 2016). Finally, lobsters’ practice of molting of their shells during growth stages was associated with the idea of renewal, and therefore specifically linked to the resurrection of Christ (Impelluso, 2003).

Although large portions of the borders of the United States, France, and Italy adjoin the ocean, paintings from these national schools depicted shellfish and fish less than 12% of the time. Perhaps for these countries, shellfish and seafood were not as exotic and would not project the same impression of worldliness. Still, the fact remains that even in these countries, much more game would be found inland and consumed than coastal seafood—a delicacy that could still have been considered an aspirational item to consume (Adamson, 2002).

With vegetables and fruits, single item fruits were much more widely painted than single item vegetables. The vegetable with the highest incidence was artichoke, with 5% total incidence (Table 1). In contrast, lemons were featured in more than 30% of all paintings and in 51% of Dutch paintings. Some fruits or vegetables might be painted as they are aesthetically pleasing because of their color or shape or as they are more challenging to paint. While this might explain why an artful artichoke was commonly painted across countries, it does not explain why another fruit or vegetable would be much more commonly painted in one country than another. For instance, the complexity of depicting a lemon’s surface texture, color, and juicy interior would explain its general popularity among artists—among Dutch painters, painting lemons correctly was something of a test of skill (Hochstrasser, 2007). But other factors, such as increased availability (despite a continued costliness in the market, to be sure), might in part explain the lemon’s exaggerated appeal in the Dutch painting. At a time when the Netherlands was enjoying an “embarrassment of riches” through its shipping and import activities, an exotic citrus fruit like the lemon underscored Dutch dominance in trade. Furthermore, the lemon can play a complex symbolic role in Dutch still life painting, and, given its distinctive fragrance, its depiction was sometimes intended to visually activate the sense of smell (Cheney, 1987), the depiction of the five senses being a popular trope in Dutch painting.

Fruits were painted much more often than vegetables. Even the fifth most commonly painted fruit (the pear) was painted in 12.14% of the paintings, whereas the most commonly painted vegetable (the artichoke) was painted in no more than 5% of the paintings. This affinity of fruit over vegetables could be due to aesthetics and what a given painter believes as visually pleasing. The varied colors, textures, shapes, and aromas that are associated with fruit may be more favorable those thought of with vegetables. Certainly, there was a strong association between the pleasures of food and sex in fruit painting of the 17th century (“Rumblings From the World of Food,” 2003), and artists intentionally foregrounded this parallel for the delight of purchasing publics. Even common fruits to European countries, such as apples, were painted much more frequently over an equally common cucumber (Valenciano, Lévy-Mangin, & Mesa, 2007). Moreover, these trends seem to be apparent across all time periods. Over time, although the consumption of bread and apples is not believed to have historically changed Mennell, 1996; Weichselbaum et al., 2009), the frequency with which apples were painted increased by 302% whereas the appearances of bread dropped by 74%.

Limitations and Future Research

This research shows how content analysis can be used to better understand how the frequency of a depicted object—in this case, food—can be used to better understand new differences across countries and across time periods. Based on these findings, future studies in this area could apply the same process for data collection and collect more paintings across a longer time span, or across a wider range of countries.

This sample of paintings represents only a small fraction of those that were painted during these time periods. Furthermore, they may have represented the most notable ones of their period, thus justifying their accessibility. Many lesser known paintings or paintings considered to be of lesser quality might still contribute significantly to this study even if they do not reflect grand themes or symbolism such as those commissioned by wealthier patrons or supported by a guild (De Marchi, 1995; De Marchi & Van Miegroet, 1994). In the future, further research could more precisely investigate this thesis by focusing on one national school of
painting, or a single century, to narrow the field and produce more meaningful results for both statistical and historical readers (e.g., Montias, 1982, 1991). In addition, the number of images for study from a given artistic tradition could be greatly increased by moving beyond printed publications and consulting online art study databases such as ArtStor (www.artstor.org), or the extensive online catalogues of major museums in the United States and Europe, which are normally sortable by subject and national school. A further point that could be explored concerns the relative numbers of paintings produced by the different national schools during the time periods chosen. These numbers would be of necessity approximate, but would perhaps point up spikes or lulls in the depiction of food and table settings that could help situate the study’s data and shed light on the marketing and collecting of food-related paintings at given times. For example, the Dutch Golden Age, a period of prosperity coinciding roughly with the 17th century, saw an unprecedented production of paintings in a variety of genres, including many different genres of food paintings. It is estimated that between 1600 and 1700, Dutch artists produced more than a quarter-million still life paintings (Wallert, 1999).

One issue to be explored that arose in the coding of the items in these paintings is the relative prominence of various foods in a given composition. In some paintings, meat is very prominent, and in other instances, colorful fruit is more prominent. It is interesting to consider in what situations one might wish to highlight meat (to demonstrate wealth or power, or to remind viewers of the pitfalls of greed) and when one might instead focus on the color or the symbolism of fruit. In some cases, the inclusion of certain identifiable local foods—such as regionally identifiable cheeses, or beer—would have been understood by viewers as a patriotic statement of pride in the tiny Dutch Republic’s ability to sustain itself and even send these commodities outside its borders (Hochstrasser, 2007). The plain, salted or smoked herring that made up ordinary people’s fare in the Low Countries is another example of this native pride (Riley, 2010). In fact, in paintings produced in the various predominantly Christian nations of Europe, the simultaneous presence of fish and the absence of meat can reference the tradition of fasting during Lent by abstaining from meat on certain days (Riley, 2010), thereby conveying the importance of self-sacrifice and humility.

In the late 18th century, with the emergence of republican and socialist political climates in the nations examined here, including the young United States, cuisines became dissociated from strict adherence to hierarchical ideas of religious or aristocratic power. Instead, universal access to a wholesome, well-cooked diet based on wheat bread and beef was preached, economically prepared at home and foregrounding the family table as chief arena for transmitting the responsibilities of citizenship to the next generation (Laudan, 2013). Thus, the presence, absence, and relative prominence of certain food items on tables in paintings from what Eric Hobsbawm coined as “the long nineteenth century” (1789-1914) might prove fruitful in future.

A more careful sorting of the types of paintings depicting food might also yield a more nuanced set of information for this study. One can imagine that if a family paid for an artist’s work, they may want to be portrayed at a special meal, and not an everyday meal (Loughman & Montias, 2000). In such cases, these paintings might be less aspirational and simply more celebratory.

In the end, the findings and objective in this study were not meant to put forward a specific argument about sociology, economics, or causality. Art that is “paid or displayed” is not necessarily art that represents everyday life (Montias, 1995). Still, quantitative content analysis is an overlooked tool that others might use to better understand history and how it is depicted through art. As a result, these findings can provide scholars with a route to discover how foods were and are used in art and how this practice may reflect, or inspire, real-life settings.

**Conclusion**

Paintings usually reflect an ideal setting for a painter or for the individual for whom it is being painted (Nygard, 2015b). For the paintings studied, most led to more aspirational types of food, more visually pleasing food arrangements, and foods that presented more challenging artistic tasks to render in paint—rather than an accurate record of what families ate in the home. Alternatively, they might also be depicting celebratory meals. In either case, they may not be portraying the everyday meal. In the future, viewers and appreciators of art may want to take care to not project what is in paintings as what is indicative of what was actually consumed or eaten. While these conclusions have been suggested in some cases in the art historical literature, especially over the past three decades, content analysis can be used to validate observations and raise new questions to be considered across disciplines, so that researchers can better understand how the frequency of a depicted object can highlight differences across countries and across time periods, and make new statements about the cultural importance of food.

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