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An Interdisciplinary Approach to Historic Diet and Foodways: the FoodCult Project

Susan Flavin

Trinity College Dublin, sflavin@tcd.ie

Meriel McClatchie

University College Dublin, meriel.mcclatchie@ucd.ie

See next page for additional authors

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An Interdisciplinary Approach to Historic Diet and Foodways: the FoodCult Project

Authors

Susan Flavin, Meriel McClatchie, Janet Montgomery, Fiona Beglane, Julie Dunne, Ellen OCarroll, and Andrew Parnell

An Interdisciplinary Approach to Historic Diet and Foodways: The FoodCult Project

Susan M. Flavin¹, Meriel McClatchie², Janet Montgomery³, Fiona Beglane⁴, Julie Dunne⁵, Ellen O'Carroll⁶ and Andrew Parnell⁷

¹Trinity College Dublin; ²University College Dublin; ³Durham University; ⁴IT Sligo; ⁵University of Bristol; ⁶University College Dublin; ⁷Maynooth University

Abstract

This research note introduces the methodology of the FoodCult Project, with the aim of stimulating discussion regarding the interdisciplinary potential for historical food studies. The project represents the first major attempt to establish both the fundamentals of everyday diet, and the cultural 'meaning' of food and drink in early modern Ireland, c 1550-1650. This was a period of major economic development, unprecedented intercultural contact, but also of conquest, colonisation and war, and the study focusses on Ireland as a case-study for understanding the role of food in a complex society. Moving beyond the colonial narrative of Irish social and economic development, it enlarges the study of food and identity to examine neglected themes in Irish historiography, including gender, class and religious identities, as expressed through the consumption of food and drink.

Taking advantage of exciting recent archaeological discoveries and the increased accessibility of the archaeological evidence, the project develops a ground-breaking interdisciplinary approach, merging micro-historical analytical techniques with cutting-edge molecular science, experimental archaeology, data modelling and statistical analysis, to examine what was eaten, where, why and by whom, at a level of detail previously deemed impossible for this period in history. This overview provides a framework to facilitate the interpretation of descriptive literary, visual, and other representative historical sources for diet, building a bridge between ideas and practises in the development of early modern foodways. The project will lead to unparalleled collaboration across the sciences and humanities, serving as a model for future comparative interdisciplinary work across diverse chronologies and regions.

Keywords

Ireland; interdisciplinary; food history; foodways; early modern

Historians have traditionally been reticent to engage with food as a "serious" academic subject.¹ In the past two decades, however, the field has witnessed a dramatic

¹ Warren Belasco, *Food: The Key Concepts* (London: Bloomsbury, 2008) and James G. Carrier, *Gifts and Commodities: Exchange and Western Capitalism since 1700* (London: Routledge, 1994). Although a new "field" of study, important earlier work, includes: Andrew B. Appleby, "Diet in sixteenth-century England, sources, problems and possibilities", in Charles Webster ed., *Health, Medicine and Morality in the Sixteenth Century* (Cambridge: Cambridge University Press, 1979), 97-116; Christopher Dyer, *Standards of Living in the Middle Ages* (Cambridge: Cambridge University Press, 1989); Dyer, *Everyday Life in Medieval England* (London: Bloomsbury, 2004);

expansion, with the deployment of new multidisciplinary approaches to examine both patterns of consumption and the cultural “meaning” of food in diverse social contexts.² Together these studies are expanding our understanding of the past; illuminating everyday life at a level not previously conceivable. Food history has become a dynamic field; no longer an “insular historical subgenre on its own” but a “subject that sits at the heart of historical study and spreads right through its breadth.”³

Martha Carlin ed., *Food and Eating in Medieval Europe* (London: Bloomsbury, 1998); Jack Drummond, *The Englishman’s Food* (London: Jonathan Cape, 1957); Constance Anne Wilson, *Food and Drink in Britain* (London: Constable, 1973).

² For example: PATTERNS OF CONSUMPTION: Joan Thirsk, *Food in Early Modern England: Phases, Fads, Fashions 1500-1760* (London: Hambledon Continuum, 2007); Mark Dawson, *Plenti and Grase: Food and Drink in a Sixteenth-Century Household* (Totnes: Prospect Books, 2009); Craig Muldrew, *Food, Energy and the Creation of Industriousness*, (Cambridge: Cambridge University Press, 2011); Jane Whittle and Elizabeth Griffiths, *Consumption and Gender in the Early-Seventeenth Century Household* (Oxford: Oxford University Press, 2012). CULTURAL APPROACHES: Allen J. Grieco, *Food, Social Politics, and the Order of Nature in Renaissance Italy* (Cambridge, MA: Villa I Tatti, 2020); Beat Kümin ed. *A Cultural History of Food in the Early Modern Age* (London: Bloomsbury, 2012); Jean-Louis Flandrin, and Massimo Montanari, eds, *Food, A Culinary History* (New York: Columbia University Press, 1999); IDENTITY FORMATION: Allen J. Frantzen, *Food, Eating and Identity in Early Medieval England* (Woodbridge: Boydell Press, 2014); Paul Lloyd, *Food and Identity in England, 1540-1640* (London: Bloomsbury, 2015); FOOD AND RELIGION: Ken Albala, “The ideology of fasting in the Reformation era” in Ken Albala and Trudy Eden, eds., *Food and Faith in Christian Culture* (New York: Columbia University Press, 2002), 41-58; Christopher Kissane, *Food, Religion and Communities in Early Modern Europe* (London: Bloomsbury, 2018); Eleanor Barnett, “Reforming Food and Eating in Protestant England, c. 1560 – c. 1640”, *The Historical Journal*, 63 (2020): 507-27; SOCIAL CLASS AND IDENTITY: Ken Albala, *Eating Right in the Renaissance* (Berkeley: University of California Press, 2002); Sheila McTighe, “Foods and the Body in Italian Genre Paintings, about 1580: Campi, Passarotti, Carracci,” *Art Bulletin*, Vol. 86. 2 (2004): 301-33; Laura Giannetti, “Italian Renaissance Food-Fashioning or The Triumph of Greens”, *California Italian Studies*, 1(2) (2010); Allen J. Grieco, “Food and Social Classes in Late Medieval and Renaissance Italy”, in Jean-Louis Flandrin and Massimo Montanari, eds., *Food: A Culinary History*, (New York: Columbia University Press, 1999), 302-12. DRINK AND SOCIABILITY: Beat Kümin, *Drinking Matters: Public Houses and Social Exchange in Early Modern Central Europe* (Basingstoke: Palgrave Macmillan, 2007) and Mark Hailwood, *Alehouses and Good Fellowship in Early Modern England* (Woodbridge: Boydell Press, 2016); MATERIAL CULTURE: Sara Pennell, ““Pots and pans history”: the material culture of the kitchen in early modern England”, *Journal of Design History* 11:3 (1998): 201-216; Pennell, “Material culture of food in early modern England” in Sarah Tarlow and Susie West, eds., *The Familiar Past? Archaeologies of Later Historical Britain* (London and New York: Routledge, 1999), 35-50 and *The Birth of the English Kitchen, 1600-1850* (London: Bloomsbury, 2016); GENDER: Sara Pennell, “Perfecting Practice? Women, manuscript recipes and knowledge in early modern England”, in Victoria E. Burke and Jonathan Gibson, eds., *Early Modern Women’s Manuscript Writing* (Aldershot: Ashgate, 2004); Judith M. Bennett, *Ale, Beer and Brewsters in England: Women’s Work in a Changing World, 1300-1600* (Oxford and New York: Oxford University Press, 1996); Natasha Glaisyer and Sara Pennell, *Didactic Literature in England, 1500-1800: Expertise Constructed* (Aldershot: Ashgate, 2003); Wendy Wall, *Staging Domesticity: Household Work and English Identity in Early Modern Drama* (Cambridge: Cambridge University Press, 2002); EXCHANGE AND HOSPITALITY: Felicity Heal, *Hospitality in Early Modern England* (Oxford: Oxford University Press, 1990); Felicity Heal, “Food gifts, the household and the politics of exchange in early modern England”, *Past and Present*, 199 (May 2008): 41-70. SPECIALIST JOURNALS include: *Food and History*; *Food, Culture and Society*; *Food and Foodways*; *Gastronomica*.

³ Kissane, *Food, Religion and Communities*, 2.



'The Mac Sweynes Seated at Dinner', John Derricke, *The Image of Irelande* (London, 1581)

Much of this new historiography focusses on Europe in the sixteenth and seventeenth centuries. This is unsurprising. The early modern period was one of profound change in diet and food worldviews. Growing international trade and an increase in intercultural contact introduced new foods and consumables to Europeans and encouraged the exploration of emergent markets. The expansion of political power, and the growth of empires bred aggressive colonial food politics and an increasing ideological awareness of “national” foodways.⁴ New ideas, particularly the intellectual culture of humanism, inspired lively debates about what should be eaten, how and by whom.⁵ At the same time, changing religious ideas, as a result of the Reformation, led to a shift in the spiritual “meaning” of food and, in parts of Europe, to radically different patterns and components of diet.⁶ Food was a key agent in the social, political and economic transformations of this period, and, in turn, these transformations made diet paramount to processes of early modern self-fashioning

⁴ Albala, *Eating Right*, 217-39; Brian Cowen, “New worlds, new tastes, food fashions after the Renaissance”, in Paul Freedman ed. *Food: The History of Taste California Studies in Food and Culture*, 21 (Berkeley and Los Angeles: University of California Press, 2007), 196-231.

⁵ Joan FitzPatrick, *Three Sixteenth-Century Diaries* (Manchester: Manchester University Press, 2017).

⁶ Kissane, *Food, Religion and Communities*; Albala, *Food and Faith*; Albala, *Food in Early Modern Europe* (Connecticut: Greenwood Press, 2003).

and identity formation.⁷ It is, therefore, a dynamic lens through which historians can explore a myriad of themes in early modern history.

While it is clearly the case that food history has finally “arrived” as a field of study, issues remain regarding how to approach such a vast and all-encompassing subject.⁸ At present, mirroring the historiographical split in early-modern consumption studies more broadly, efforts are divided between quantitative-based projects exploring dietary trends on the one hand and more culturally focussed “semiotic, attitudinal and even literary” projects on the other.⁹ Of late, studies of the latter type have come to lead this field. While such work adds enormous value to our understanding of evolving food cultures, there remains a vital need to ground early modern food ideologies and representations in a framework of *actual* dietary practices. Put bluntly, how can we understand the expression of religious identity through food if we do not evaluate changes in the rituals of fasting or in the relative consumption of meat and fish? How can we comprehend the significance of food in the context of Renaissance “self-fashioning” or globalisation if we do not also explore changing patterns of elite food consumption?¹⁰ How can we approach the ideological role of food in the emergence of “national” identities if we do not also explore the comparative diets of diverse intercultural groups? Undertaking such analysis is, of course, hugely challenging for historians. The lack of detailed documentary evidence for diet, especially beyond the level of elite consumption, means that deep analysis can only be achieved through sustained interdisciplinary cooperation across science, technology, and the humanities. What follows is a blue-print for a history-led interdisciplinary approach to early modern diet and foodways, focussing on Ireland as a case study of analysis.

Food in Irish Historiography

In an Irish context, sixteenth and seventeenth-century food history is remarkably under-represented.¹¹ The excitement generated by this field and period in Europe has

⁷ McTighe, “Foods and the Body”, 312; Gianetti, “Italian Renaissance food-fashioning or the triumph of greens”.

⁸ Kissane, *Food, Religion and Communities*, 9; Priscilla Ferguson, “Eating orders: markets, menus, and meals”, *The Journal of Modern History*, Vol. 77, No. 3 (September 2005): 679-700.

⁹ Sara Pennell, “Consumption and consumerism in early-modern England”, *Historical Journal*, 42 (1999): 549-64; Susan Flavin, *Consumption and Culture in Sixteenth-Century Ireland, Saffron, Stockings and Silk* (Woodbridge: Boydell Press, 2014), 14.

¹⁰ Stephen Greenblatt, *Renaissance Self-Fashioning: From More to Shakespeare* (Chicago: University of Chicago Press, 1980).

¹¹ In historiographical terms, our understanding of Irish food c. 1550-1650 is limited to a handful of studies. These include broad surveys by Anthony T. Lucas and Patrick W. Joyce which, being based primarily on literary sources, pay little attention to the chronological, social, or economic context of changing patterns of dietary consumption. More recent, is Leslie A. Clarkson and Margaret E. Crawford’s broad overview *Feast and Famine: A History of Food and Nutrition in Ireland 1500–1920* (Oxford: Oxford University Press, 2001), the first “systematic” approach to the topic. While ground-breaking in an Irish context, analysis of the early modern period is limited to a single

had little sustained impact in Ireland, where there exists a “telling contrast” to explorations of the subject elsewhere.¹² There are two deterrents to scholarly engagement. The first is the deeply engrained assumption that the dearth of primary source material, resulting from the destruction by fire of the Public Record Office in 1922 precludes all but the most “generalised approaches” to the subject.¹³ The second is ideological. There is a tendency in Ireland, as elsewhere, to see certain areas of life as more “serious, significant, and worthy of attention” than others.¹⁴ As such, politics, religion and warfare still tend to dominate early modern Irish historiography, with studies of “everyday life” deemed less worthy of attention. There is another issue also. As Barnard noted, in a society where so many died of famine, the materials of life, often not sufficing for subsistence, are assumed to be unworthy or too sparse to warrant investigation.¹⁵ Certainly, at present, our detailed knowledge of pre-modern Irish diet is limited almost entirely to the Great Famine of 1845-1852, an event of such magnitude that it has dominated the historiography for generations, stultifying energies to explore food consumption beyond basic subsistence, and limiting our understanding of intercultural food interactions to the colonial narrative of exploitation and oppression.¹⁶

chapter, and although quantitative sources are noted, there is no effort to produce or engage with data for actual trends in consumption. Rather, the chapter’s conclusions are based almost entirely on descriptive sources; those of colonial observers preoccupied with the “barbarity” of Irish diet. Other recent efforts include Liam Downey and Ingelise Stuijts, “Overview of historical Irish food products: A.T. Lucas (1960–2) revisited” in *The Journal of Irish Archaeology*, Vol. 22 (2013): 111-126, which suggests the value of an interdisciplinary approach. It is notable that considerably more work has been undertaken for the late seventeenth and eighteenth centuries. For an overview of changing diet from the seventeenth century, See Louis M. Cullen, *The Emergence of Modern Ireland, 1600-1900* (London: Batsford Academic, 1981). For recent efforts, from a cultural perspective, see works on manuscript recipe books including: Madeleine Shanahan, *Manuscript Recipe Books as Archaeological Objects: Text and Food in the Early Modern World* (Lanham, MD: Lexington Books, 2014) and Dorothy Cashman, “An investigation of Irish culinary history through manuscript cookbooks, with particular reference to the gentry of County Kilkenny (1714-1830)”, Unpublished PhD thesis (TU Dublin, 2016). See also Tara McConnell, ““Brew as much as possible during the proper season”: beer consumption in elite households in eighteenth-century Ireland” and Cashman, ““That delicate sweetmeat, the Irish plum”: the culinary world of Maria Edgeworth (1768-1849)”, both in Máirtín Mac Con Iomaire and Eamon Maher, eds., *‘Tickling the Palate’: Gastronomy in Irish Literature and Culture* (Oxford: Peter Lang, 2014), 117-189: 15-34.

¹² Toby Barnard, *A Guide to the Sources for the History of Material Culture in Ireland, 1500-2000* (Dublin: Four Courts Press, 2005), 9.

¹³ Clarkson and Crawford, *Feast and Famine*, 17.

¹⁴ Carrier, *Gifts and Commodities*, 1.

¹⁵ Barnard, *Guide*, 17. For more recent commentary on the problem see: Máirtín Mac Con Iomaire, “Gastro-topography: exploring food-related placenames in Ireland”, *The Canadian Journal of Irish Studies*, Vol. 38, No. 1/2 (2014): 126-157, 128 and Darra Goldstein, “Foreword”, in Mac Con Iomaire and Maher, eds., *‘Tickling the Palate’*, p. xii.

¹⁶ Barnard, *Guide*, 17. For example: Tim Pat Coogan, *The Famine Plot: England’s Role in Ireland’s Greatest Tragedy* (New York: Macmillan, 2013); John Crowley and William J. Smyth, *Atlas of the Great Irish Famine* (Cork: Cork University Press, 2012); John Mitchel, *Ulster and the Great Irish Famine* (Kildare: Irish Academic Press, 2017). Earlier work includes: Cecil Woodham Smith, *The Great Hunger: Ireland 1845-1849* (London and San Francisco: Hamish Hamilton, 1962); Francis

This neglect of early modern food is especially problematic in an Irish context, where the subject takes on additional significance. Between 1550 and 1650, successive waves of immigration, from England, Scotland, Wales, France and the Netherlands, driven by colonisation and conquest, trade, and religious exile, transformed the demography and infrastructure of Ireland, leading to unprecedented intercultural contact; radically changed settlement patterns, and complex and contested processes of acculturation that, to this day, define Irish society. In this turbulent period, food was central to identity formation, as evidenced by the obsessive attention paid to diet in topographical descriptions, colonial propaganda and travel literature.¹⁷ It distinguished competing ethnic and religious communities; functioned in the justification and brutal processes of colonisation and conquest; in the “othering” of racial groups; and in the complex negotiation of political and economic power. Indeed, as England’s so-called “laboratory for Empire” – the place where her attitudes to colonisation were first formed – Ireland played a crucial role in the development of “racial” food identities, and in constructions of “Englishness” expressed through food ideologies.¹⁸ Ireland therefore presents a very interesting case study for exploring what

Stewart Leland Lyons, *Ireland since the Famine* (London: Weidenfeld and Nicholson, 1972); Joel Mokyr, *Why Ireland Starved, A Quantitative and Analytical History of the Irish Economy 1800–1850* (London: Allen & Unwin, 1983); Austin Bourke, Jacqueline R. Hill, Cormac Ó Gráda, eds., *The Visitation of God?: The Potato and the Great Irish Famine* (Dublin: Lilliput Press, 1993); Ruth Dudley Edwards, T. Desmond Williams, Cormac Ó Gráda, *The Great Famine: Studies in Irish History 1845-52* (Dublin: Lilliput Press, 1994); Tom Hayden ed., *Irish Hunger: Personal Reflections on the Legacy of the Famine* (Dublin: Wolfhound Press, 1995); Christine Kinealy, *This Great Calamity: The Irish Famine 1845-52* (Dublin: Gill & Macmillan, 1995); Peter Gray, “The triumph of dogma: the ideology of famine relief”, *History Ireland*, 3 Summer, 2), 1995; Cormac Ó Gráda, *Black '47 and Beyond: The Great Irish Famine in History, Economy, and Memory* (Princeton NJ: Princeton University Press, 1999); Peter Gray, *Famine, Land, and Politics: British Government and Irish Society, 1843-1850* (Dublin: Irish Academic Press, 1999); Liam Kennedy, Paul S. Ell, E. Margaret Crawford and Lesley A. Clarkson, eds., *Mapping the Great Irish Famine: A Survey of the Famine Decades* (Dublin: Four Courts Press, 1999); Donald M. MacRaild, *The Great Famine and Beyond: Irish Migrants in Britain in the Nineteenth and Twentieth Centuries* (Dublin: Irish Academic Press, 1999); Cormac Ó Gráda, *Ireland's Great Famine: Interdisciplinary Perspectives* (Dublin: University College Dublin Press, 2006); James Donnelly, *The Great Irish Potato Famine* (Stroud: Sutton Publishing, 2002); Joseph R. O'Neill, *The Irish Potato Famine* (Edina MI: ABDO Publishing Co., 2009); Redcliffe N. Salaman, *History and Social Influence of the Potato* (Cambridge: Cambridge University Press, 1949).

¹⁷ For example: Fynes Moryson, *An Itinerary* (London: John Beale, 1617); John Derricke, *The Image of Ireland* (London: John Day, 1581); Edmund Campion, *Historie of Irelande in the year 1571* (New York: Scholars' Facsimiles and Reprints, 1940); Edmund Spenser, *View of the Present State of Ireland* ed. W. L. Renwick (Oxford: Clarendon, [1575], 1970); Sir John Davies, *A Discovery of the True Causes Why Ireland was Never Entirely Subdued* (London: Unknown, 1611); Luke Gernon, *A Discourse of Ireland anno 1620*, Stowe MS. Volume 28, folio 5. See also: Joan FitzPatrick, *Irish Demons: English Writings on Ireland, the Irish, and Gender by Spenser and His Contemporaries* (Lanham: University Press of America, 2000).

¹⁸ Jane H. Ohlmeyer, “A laboratory for Empire?: Early modern Ireland and English Imperialism”, in Kevin Kenny, ed. *Ireland and the British Empire* (Oxford: Oxford University Press, 2004); Nicholas Canny, *Kingdom and Colony: Ireland in the Atlantic World, 1560-1800* (Baltimore: Johns Hopkins University Press, 1988); Nicholas Canny, “Identity formation in Ireland, the emergence of the Anglo-Irish” in *Colonial Identity in the Atlantic World, 1500-1800* eds. Nicholas Canny and Anthony Pagden (Princeton: Princeton University Press, 1989), 159-212; For recent endeavours to

food “means” in contested societies. Nonetheless, while exploring this theme is central to the objectives of the project, so too, paradoxically, is moving the focus on Irish diet beyond the narrow colonial narrative. This narrative oversimplifies the Irish experience, conflating complex issues of gender, class, and religious identity in a colonial context, ignoring wider global influences on Irish foodways, and presenting a passive portrayal of consumption, as driven entirely by the Anglicising process. A deep and sustained study of food is an opportunity to enlarge the study of daily life and identity in Ireland, to examine neglected themes in the historiography, and to situate the Irish experience within the rich and diverse new historiography, thus opening a dynamic new chapter in Irish food history.

Approaches to Dietary Trends: Macro and Micro-Histories

The genesis of the FoodCult idea, and the first study to examine trends in sixteenth-century Irish consumption was the *Ireland-Bristol Trade Project*, which focussed on the analysis of a series of customs data from between 1503 and 1601.¹⁹ The key finding was that Ireland, contrary to its reputation as an economically and socially isolated colonial backwater, witnessed an unexpected “consumer boom” during this period. Analysis of the customs data, as shown in figure 1, which shows the range of goods imported to Ireland over the sixteenth century, suggested a dramatic increase over time. This included many new products in the trade, including foodstuffs like rice, currants, tobacco, and hops. Other items demonstrate diversification or commodification, with cheaper versions of manufactured items such as knives and drinking glasses appearing on the market. There was also growing volume of certain commodities, including luxury foodstuffs such as sugar. These items were diffused well beyond the main centres of English power in Ireland, and indeed trends in both imports and exports from the country indicate that “Anglicisation” was not the key driving force of consumer changes. Rather, the evidence suggests that Ireland played an active and independent part in sixteenth-century processes of globalisation.

establish a comparative historiography of colonialism in the “Atlantic World” see Audrey Horning and Nick Brannon, eds. *Ireland and Britain in the Atlantic World*. Irish Post Medieval Group Proceedings 2. (Dublin: IPMAG, 2010).

¹⁹ Susan Flavin and Evan T. Jones, eds. *Bristol’s Trade with Ireland and the Continent: The Evidence of the Exchequer Customs Accounts* (Dublin: Four Courts Press, 2009); Susan Flavin “Consumption and material culture in sixteenth-century Ireland”, *Economic History Review*, Vol. 64, Issue 4 (November 2011): 1073-1427 and *Consumption and Culture*.

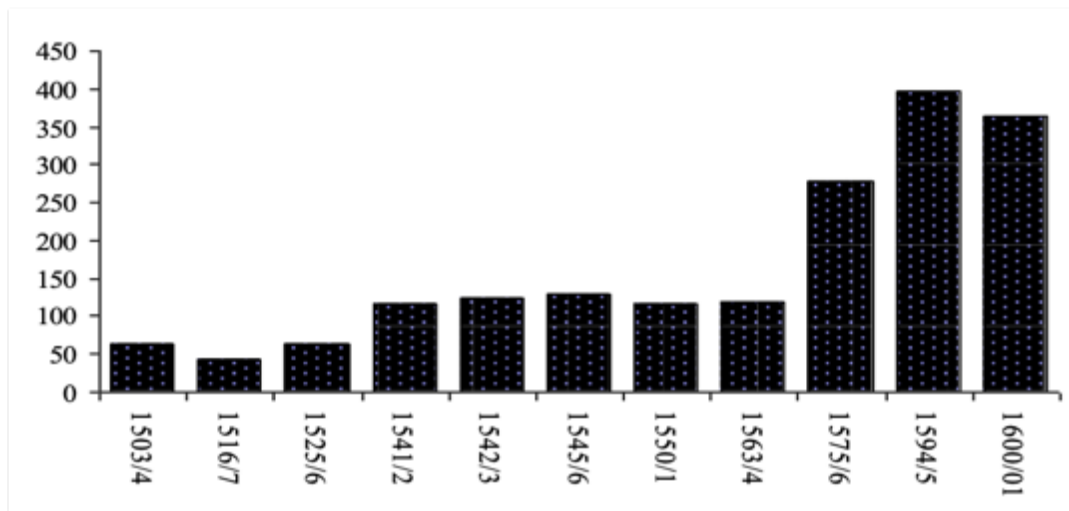


Figure 1: Range of individual commodities imported to Ireland from Bristol, 1503-1601; Source: S. Flavin, *Consumption and Culture in Sixteenth-Century Ireland* (Woodbridge, 2014)

The contextualised quantitative analysis of these trade records greatly enhanced our understanding of Irish trade and integration, while simultaneously demonstrating the immense value of approaching contemporary social and political complexities through the study of consumption and material culture. Nonetheless, as a macro-historical source, customs records prove very limited in scope and utility. While import records, for example, may indicate important broad trends in the demand for new types of food, drink, and manufactured consumables, these are mostly restricted to luxury items and shed little light on the consumption of everyday staples. In addition, although “consumer” demand can be inferred from lists of items shipped, we know little of how new goods were diffused, received, or interpreted, if indeed, they safely reached the country. Further, while the surviving Bristol accounts for the sixteenth century are excellent, the level of detail in these records is not continued into the seventeenth century. Finally, while the records do indicate the spread of goods beyond the English Pale, they say nothing about Gaelic Irish consumption, or particularly, the extensive trade from Gaelic zones to and from continental Europe, which was reportedly immense, but never subject to tax and therefore not recorded.

The integration of micro-historical approaches can help to expand the assessment of dietary consumption and ameliorate some of the limitations of the customs data. In particular, the analysis of household accounts, as demonstrated in an English context, can open a valuable window on food, illuminating changing temporal and seasonal components of “everyday” diet with regards to select domestic and institutional sites.²⁰

²⁰ For the late medieval period see: Barbara Harvey, *Living and Dying in Medieval England, 1100-1540* (Oxford: Oxford University Press, 1993); Dyer, *Standards of Living in the Later Middle Ages*; Chris M. Woolgar, *The Great Household in Late Medieval England 1100-1540* (London: Yale University Press, 1993); Miranda Threlfall-Holmes, *Monks and Markets: Durham Cathedral Priory 1460-1520* (Oxford: Oxford University Press, 2005). These approaches have in very recent years been adopted for the early modern period in England, which will provide a point of comparison for analysis as

In Ireland, survival of such records is limited and fragmentary but includes a reasonably representative range. Records include detailed provisioning accounts for the Elizabethan soldiery in Ireland; institutional records for Christchurch Cathedral (select years 1541-1650); a single household account for Francis Agard in Dublin (1576/7); and a detailed range of accounts relating to elite households including Richard Boyle, Earl of Cork; Walter Devereaux, the Earl of Essex; and various Lords Deputy. Provisional analysis shows that these accounts, which will be forensically analysed as part of the FoodCult project, can illuminate a wide range of consumption types (food; objects; fuel; labour). They facilitate the analysis of seasonal trends in the use of non-imported goods and the staples of everyday life including meat, bread and fish and are very informative on the production/components of certain foods, such as bread and beer. They show the use of luxury goods that are absent from the limited range of surviving customs records, including items such as turkey, artichokes, and pineapples. Crucially, they demonstrate how new types of imports were utilised; for example, the quantity of hops used to make different types of beer, the volumes of sugar and various spices expended, and the occasions when these luxuries were used, i.e. the “lifecycle” of foodstuffs. Further, although a quantitative source, they are highly informative on social and cultural aspects, including, for example, distinctions between elite and lower-class consumption (servants and labourers), ritual patterns of eating, such as religious fasting, the gift economy, and also the material culture of food preparation and consumption, with regards to objects and space.

Of the accounts identified for inclusion in the project, special note should be made of those produced at Dublin Castle by the treasurers of various Lords Deputy, and which cover full select years between 1550 and 1595. These accounts, generally overlooked in favour of the military records, are an important resource. As the seat of English power in Ireland, Dublin Castle was a major centre of consumption. The accounts record provisioning arrangements and daily consumption patterns in minute detail and throw light on local markets; wages and prices; the importation and internal transport of luxury imported foodstuffs; seasonal availability of food; relative consumption of meat, fish and dairy products and the components of staples such as bread and beer. Further, from another perspective, the Castle was also deeply connected to local society. Food was requisitioned, purchased, and gifted, such practices illuminating the complex relationship between the English administration and Irish communities. These accounts, therefore, can demonstrate social and political aspects of dietary consumption in a turbulent period, and as such are an important source with regards to understanding the “meaning of food” in Ireland.

Provisional analysis of these records reveals interesting trends in this regard. Table 1 and Figure 2, for example, show a breakdown of the relative volumes of meat, fish

well as a set of techniques that will be adapted in an Irish context. See: Dawson, Plenti and Grase; Jane Whittle and Elizabeth Griffiths, *Consumption and Gender in the Early-Seventeenth Century Household* (Oxford: Oxford University Press, 2012).

and dairy consumed at Dublin Castle by the Lord Deputy's household in the year 1590/1. Excluding bread and beer, consumption comprised around 80 per cent red meat, with beef accounting for approximately 66 per cent of intake (in edible lbs). Similar figures are found for the years 1570/1 and 1574/5. This is a staggering amount of beef. Comparative figures for relative consumption in great households in England, estimate beef consumption at around 33 per cent of dietary intake.²¹ What makes this particularly thought provoking in an Irish context is the origin of this meat. In 1590/1 around one third of the beef consumed originated as a gift, tax, or tithe. Indeed, 40 percent more beef was received as a "gift" from Gaelic Irish lords, given in return for English acknowledgement of their Chieftain, than was purchased on the market. So, in other words, the political situation in late sixteenth-century Ireland impacted directly on dietary trends in the Lords Deputy's household.

Table 1: Relative meat, fish, and dairy consumption at Dublin Castle, 1590/1 (edible lbs.). Source: Fitzwilliam Manuscripts (Irish), Northamptonshire Record Office

<i>Food Type</i>	<i>Relative Consumption (edible lbs)</i>
Beef/Veal	66%
Mutton/Lamb	4%
Kid	1%
Pork	8%
Preserved Fish	5%
Poultry	8%
Rabbit/Hare	2%
Butter	1%
Plaice/Whiting/Haddock	5%

In addition to the political significance, there is a deep cultural significance to these trends. In recent years, explorations of the "meaning" of food in early modern society, through the systematic study of the dietary/regimen genre, have demonstrated the increasing link between food and national identities from the mid-sixteenth century.²² In particular, beef became central to "food-fashioning" and to constructions of "Englishness" in this period.²³ Challenging received wisdom, humanist dietary writers, concerned with the health of the English body politic, extolled beef, by "nature and

²¹ Whittle, *Consumption and Gender*, 89. See Dawson, Plenti and Grase, 87.

²² Albala, *Eating Right*, 217-40; FitzPatrick, *Three Sixteenth-Century Dietaries*, 1-37.

²³ The term "food-fashioning" was coined by Laura Gianetti, in "Italian Renaissance Food-Fashioning" and is a play on Gleenblatt's concept of "self-fashioning".

custom”, as “most nourishing unto English bodies; which may easily appear in the difference of their strength, and clean making, which feed chiefly upon it”.²⁴ The meat was associated with hard work, physical strength and English masculinity. This association is abundantly clear in the outpouring of colonial English descriptions of Irish diet in this period, which parrot dichotomous representations of English and Irish foodways, emphasising the lack of beef in the Irish diet and the over-reliance on dairy produce. Analysis by cultural historians seeking to understand the significance of such food associations stress their purely representational nature. Menno Spiering, for example, claimed that “though it was never a true staple, beef became the prime emblem of Englishness in the sixteenth century and has remained so ever since”.²⁵ The problem here, of course, is that it is impossible to understand dietary representation without examining its basis in actual consumption. The provisional trends uncovered at Dublin Castle, the key site of England’s contested colonial power, during the formative period of national food ideologies, suggests a dynamic link between ideas and practises and demonstrates the vital importance of holistic approaches to diet and food-ways in this and other periods.

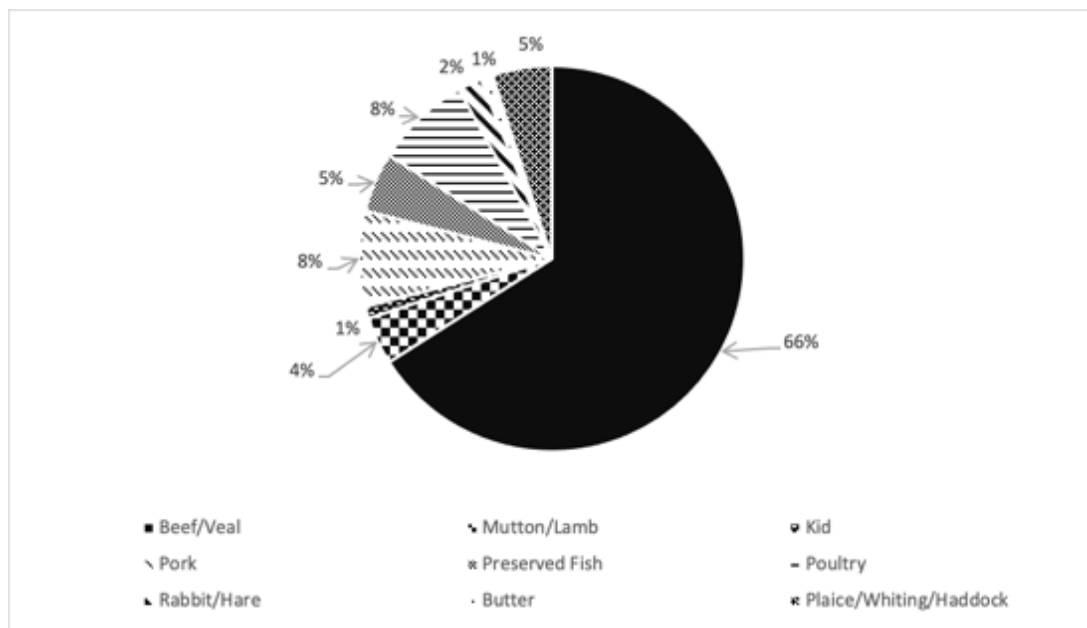


Figure 2: Relative meat, fish, and dairy consumption at Dublin Castle, 1590/1 (lbs). Source: Fitzwilliam Manuscripts (Irish), Northamptonshire Record Office

Micro-historical approaches to diet then, through the analysis of household accounts, offer immense potential for informing on dietary trends and complex

²⁴ Thomas Cogan, *The Haven of Health* (London: Thomas Orwin for William Norton, 1589), 114; Thomas Muffett, *Health's Improvement* (London: Tho: Newcomb for Samuel Thomson, 1655), 59; Thomas Elyot, *The Castle of Health* (London: Thomas Bertheleti, 1541), chapter 8; Andrew Boorde, *A Compendious Regiment* (London: W. Copeland, 1542), chapter 16.

²⁵ Menno Spiering, “Food, Phagophobia and English National Identity”, in Thomas M. Wilson, ed., *Food, Drink and Identity in Europe*, *European Studies* 22 (New York: Brill Rodopi, 2006), 31-48.

foodways. Despite this, however, household accounts have obvious limitations as a historical source. Relatively few survive and outside those noted above, full annual accounts are rare. Further, of course, lower class and native Irish habits are under-represented; geographical focus is restricted more to urbanised and generally more Anglicised regions and individual diets are not generally distinguishable. In addition, whilst daily accounts allow a detailed view of the components of diet in certain contexts, how foods were combined, cooked, and eaten remains unclear. Documentary approaches, then, no matter how well integrated, leave significant gaps in our knowledge of historical diets.

Mapping Diet: Comparative Food-ways in Early Modern Ireland

The FoodCult methodology addresses these limitations to the reconstruction of historical diet and foodways by integrating archaeological evidence and analyses to produce a deep, multi-layered view. In general terms, detailed archaeological examinations of diet, in any context post 1500, are scant. As recently noted by Hondelink and Schepers, the archaeological reconstruction of past food consumption in Europe tends to focus on prehistory, Roman times and the Middle Ages, with attention to the early modern period appended as a point of comparison.²⁶ In Ireland, detailed “post-medieval” archaeological examinations of diet are rare. In 2016, acknowledging the lack of scholarship on themes in everyday life, the Royal Irish Academy published a special thematic volume on *Food and Drink in Ireland*. This included dynamic new work on diet in the fields of archaeology and historical-archaeology, particularly in relation to the medieval period.²⁷ Although it surveys the whole course of Irish history, from the Mesolithic to today, it omits, almost entirely, the sixteenth and seventeenth centuries, arguably the most significant historical period in the evolution of European diets and food-related worldviews.²⁸ This dearth of work on the early modern period is a widely acknowledged problem, and there have been efforts to redress the issue. The Irish Post-Medieval Archaeology Group (IPMAG), was established, to “promote amongst academics and the public a greater understanding of Ireland’s post-1550 AD archaeology, history and material culture”.²⁹ While this has not yet led to an organised effort to examine diet, recent conferences have shown both a

²⁶ Merit M. A. Hondelink and Mans Schepers, “The common and the rare: a review of Early Modern Dutch plant food consumption based on archaeobotanical urban cesspit data”, *Vegetation History and Archaeobotany* 29 (2020): 553-565.

²⁷ Elizabeth FitzPatrick and James Kelly, eds. *Food and Drink in Ireland* (Dublin: Royal Irish Academy, 2016). For food-related themes in the medieval period see also: Catherine M. O’Sullivan, *Hospitality in Medieval Ireland, 900–1500* (Dublin: Four Courts Press, 2004); Katherine Simms, “Guesting and feasting in Gaelic Ireland”, *JRSAI* 108 (1978): 67-100. For work on the eighteenth century, demonstrating engagement with new approaches see: Shanahan, *Manuscript Recipe Books*.

²⁸ Cowen, “New worlds, new tastes”. On the sixteenth century as the origin of modern social distribution systems and nutritional problems see Appleby, “Diet in sixteenth-century England”.

²⁹ <http://ipmag.ie>

growing interest in food-related themes, along with a keen desire amongst the archaeological community for interdisciplinary cooperation and collaboration.³⁰

Building on this cooperation is timely. The key obstacles to the archaeological examination of diet in the past have been a) a perceived paucity of excavated material and b) accessing the assemblages and data: discovering what relevant materials have been retrieved, whether they have been analysed, if they have been curated and where they are stored. In the past two decades, the nature of the archaeological record has been radically altered. Due to extensive excavation activity as a result of multiple large infrastructural projects, there now exists a virtual bounty of physical evidence for Irish material culture, including the tiny, often fragmentary remains of plants that were consumed, bones from animals that were targeted for eating, and objects used in the preparation and consumption of foods.³¹ In the past ten years, the frenetic level of activity in Dublin alone has led to a series of high profile sixteenth and seventeenth-century finds, including the skeletons of malnourished “Tudor commoners” discovered outside Trinity College in Dublin; a “hoard” of seventeenth-century domestic items found at Rathfarnham Castle and the remains of a 1640s apothecaries shop, found in Dublin.³² It can take some time for archaeological excavation reports and data to appear in the public domain, however, and it is often the case that where analysis of diet occurs, it remains largely relegated to specialised technical reports, with discrete attention paid to plant remains, animal bones, objects or other materials. Analyses are largely undertaken on an individual site basis, and there can be limited integration with broader archaeological findings, or consideration of findings within the context of relevant historical evidence.

The *Mapping Diet* element of the FoodCult project will address the urgent need to draw this material together in a systematic, comparative fashion, transforming the current mass of grey literature data into knowledge. Taking advantage of recent regional and national initiatives to streamline access to the archaeological data, the team are currently engaged in identifying, collating and recording food and drink-related archaeological evidence across institutional, domestic and garden assemblages dated between c 1450 and 1700.³³ Three categories of data are being targeted: plant

³⁰ The 2016 annual conference focussed in broad terms on the “Archaeology of Consumption in Ireland c.1550-1950”, and included a range of papers exploring food related, industry, trade, and artefacts.

³¹ From 1992 to 2009 alone almost 2,300 archaeological sites were excavated on 129 road schemes in Ireland. See: Deirdre McCarthy, “Digging, Dissemination and Data” in *NRA Archaeology Magazine*, 5 (2010): 41-42.

³² <http://www.newstalk.com/Face-of-skeleton-found-near-Trinity-is-digitally-reconstructed>;
<https://archaeologyireland.ie/2017/06/16/apothecarys-shop-found-in-dublin-excavation/>;
<https://www.irishtimes.com/culture/heritage/hoard-of-17th-century-artefacts-found-at-rathfarnham-castle-1.1982372>

³³ National archives are accessible via the National Monuments Service in Dublin and the Historic Environment Division in Belfast; Regional initiatives include: the Dublin City Council archaeological archive (DCAA) <http://www.dublincity.ie/main-menu-services-planning-heritage->

remains (preserved grains, seeds, nutshell, etc.), animal remains (bone), and objects used in food-related activities (pots, knives, etc.). A relational database has been designed through collaboration between historians, archaeologists, and statistics/data modelling experts. The database structure, as summarised in figure 3, enables entry of information on site type, context of each find, phasing and dating, along with all data pertaining to plants, animals, and objects. On completion, the database will be utilised to statistically analyse relationships between various food types and objects across comparative social/occupational/ethnic and geographical site contexts, thereby shedding light on the production and consumption of animal and plant foodstuffs; food preparation; dietary consumption and the material culture of cooking and eating.

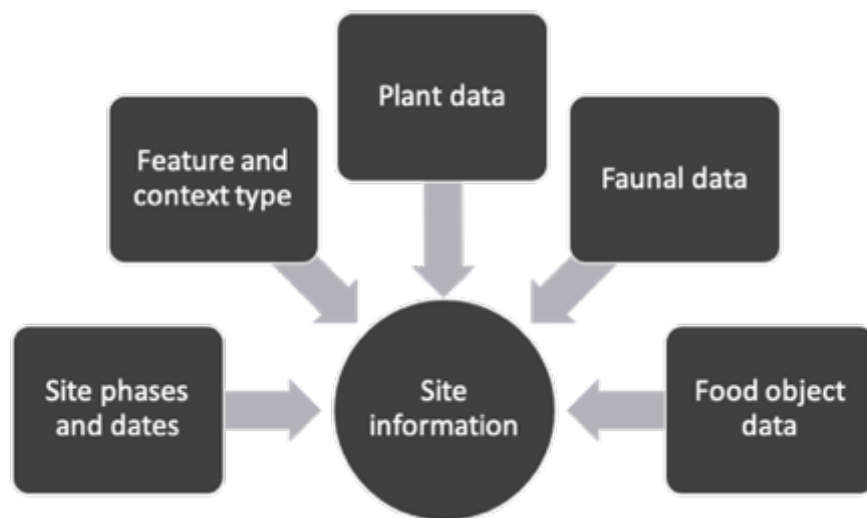


Figure 3: Schematic of FoodCult database

A key aim of the database is to test the extent to which the collated archaeological evidence can mitigate the limitations of the historical evidence noted above. In this regard, it will be analysed to explore the spread and use of new modes of consumption and food types (e.g. ceramics; tobacco pipes; cutlery; hops etc.) beyond the ports and main centres of consumption. The database records major ports and known distribution centres (markets/fairs/urban centres) so that consumption trends can be considered in relation to market access. It will also be used to examine the evidence for new types of consumption at sites/contexts where no documentary evidence exists, particularly rural Gaelic Irish habitations in the northern and western parts of the country. Further, it will be used to address the limitations of the household accounts data; to test, for example whether the trends noted in the provisional analysis of elite

[and-conservation/dublin-city-archaeological-archive](http://www.kkap.ie/) and the “Kilkenny Archaeological Project” (<http://www.kkap.ie/>); Excavation reports completed for Transport Infrastructure Ireland (one of the largest procurers of archaeological services in Ireland) are available via <https://www.tii.ie/technical-services/archaeology/road-archaeology/>.

urban institutions can be identified in any other contexts. For example, did oats really predominate everywhere? Is meat consumption high in contexts other than elite English institutions, and where did people eat more dairy, fish or meat products? Are certain objects socially restricted? A highly innovative aspect of the analysis will be the application of multivariate statistical techniques and Bayesian modelling to the integrated historical and archaeological databases. This will allow for the examination of chronological trends in the data at a micro-scale not previously seen, thereby informing on changes between the late medieval and early modern periods. This may help to illuminate further the impact of globalisation and colonisation on Irish diet and foodways while further developing the utility of statistical approaches to historical and methodological problems.

Research is currently in the early data entry phase, but thus far objects from just under 100 excavations have been recorded. Provisional findings compare well with trends in the port books noted above. The range of items imported to Ireland indicates remarkably wide commerce and increasingly sophisticated consumer demand from the sixteenth century. Food-related objects identified include plates constructed from Portuguese faience; stoneware containers and jars from Raeren in Germany; German Bartmann (bearded man) and stoneware panel jugs; olive jars from Seville; and maiolica ware from the Netherlands. Remarkably interesting is early evidence for Irish engagement with emerging global markets demonstrated through the presence of Shantou wares of the late Ming dynasty in China. Tentative analysis suggests that the diffusion of these specialised storage and dining wares was largely limited to urban centres. Rural sites, with a few exceptions, thus far demonstrate less diversity, with local and English North Devon Ware predominating. The implication here is that the commodification of cooking and dining vessels, and the changing rituals of consumption that accompanied this process, were slower to gain ground in rural Ireland. This issue will be explored in detail on completion of the database.

The Mapping Diet database has been designed with significant attention to its interoperability and re-usability. Technical terms and structures are compatible with other European systems, such as the database programme *Arbodat* for archaeobotanical data recording and sharing, and the *Forum on Information Standards in Heritage (FISH)* best practice in recording cultural heritage.³⁴ GIS maps will be generated to assist researchers in searches by location using townland identification as it appears in logainm.ie, the *Place-Names Database of Ireland*³⁵. This geo-referencing provides a spatial context to the database but will also ensure the synergy of the database with current and future historical and mapping projects. The database will

³⁴ <https://lfd.hessen.de/sites/lfd.hessen.de/files/content-downloads/ArboDat%20engl.pdf>;
<http://www.heritage-standards.org.uk/>

³⁵ <https://www.logainm.ie/en/>

also be formally linked to the EU ARIADNE network and OSCAIL³⁶, both of which were developed to ensure data sharing and collaboration across the global archaeological research community. Once complete, the database will, for the first time, align the archaeological evidence for everyday diet across different regions, ethnic groups and social classes in early modern Ireland, serving as a model for more extended comparative geographic and chronological approaches, and also a freely accessible resource for researchers interested in a diverse range of diet-related questions.

Archaeological Science

The integration of macro-and micro-historical evidence with spatially and temporally modelled archaeological data will present the most detailed possible view of early modern consumption patterns. There is, however, further interdisciplinary potential in unlocking and interpreting the historical evidence in nutritional and social terms. The project employs two core methods in this regard: Experimental Archaeology and Zooarchaeology.

Experimental Archaeology: Beer and Brewing Interdisciplinary Case-Study

The first approach narrows the focus of the study to examine one staple food in detail; integrating documentary evidence with experimental archaeological techniques and scientific analysis, to establish the nutritional value of sixteenth-century urban beer.

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While a generally overlooked dietary staple, recent work by historians has established the absolute centrality of beer to early modern diets. Based on the evidence in household and institutional accounts, Craig Muldrew, for example, produced a remarkably detailed analysis of the components and quality of beer, and the relative levels of consumption, in various regional/occupational contexts in England.³⁷ Muldrew's study demonstrated the very high quantities of beer regularly consumed, and questioned entrenched ideas, often based on very limited evidence, regarding both the potency and nutritional value of beer and its overall nutritional value. Forensic documentary analysis of this depth and scope has not yet been undertaken for any foodstuff in an early modern Irish context. Indeed, historiographical references to the production and consumption of beer indicate the underestimation of the analytical potential of the dietary record. To give one example, when discussing the production

³⁶ <https://www.ariadne-eu.org/> ; <https://www.creativeireland.gov.ie/en/partners/the-oscail-project/>

³⁷ Craig Muldrew, *Food, Energy and the Creation of Industriousness: Work and Material Culture in Agrarian England, 1550–1780* (Cambridge: Cambridge University Press, 2011).

of beer in sixteenth-century Dublin, Crawford and Clarkson, whose work is currently the only detailed study of dietary staples in this period, noted that the Proctor of Christchurch Cathedral, brewed beer for his stone masons “on at least one occasion” in 1564-5.³⁸ A more detailed examination of the relevant account for this year shows, in fact, that the Proctor brewed every ten days.³⁹ He recorded the timings and exact components of grain used in each brewing throughout the year; the very considerable volumes of beer consumed by his workers in relation to the type of labour undertaken, and the fluctuating prices paid for grain on the open market. Similarly, household accounts from Dublin Castle for the same period record consumption at a daily level, but also the frequency of brewing, the relative amounts of grains and hops used in various brews and the volume of beer produced from those grains, along with much valuable incidental information on equipment, personnel and the brewing process.⁴⁰ This level of detail makes it possible to produce a comprehensive analysis of seasonal variations in beer quality and the factors influencing the composition of beers, which can then be usefully compared to broader English and European contexts.⁴¹ This comparative focus is potentially very important, since provisional analysis suggests that alcohol consumption in Ireland was as high as in England, at up to 14 pints a day for labourers engaged in very heavy work, but that the relative components of beer differed significantly with a far higher oat-to-barley ratio in urban Irish beers. Figure 4 below, for example, presents provisional data from accounts of brewing at Christchurch Cathedral, Dublin in 1565. This clearly shows the prominence of oats in urban Irish diets. This data is particularly valuable, since English and European descriptions of diet emphasise the dietary significance of oats, usually by way of demonstrating the backwardness of Ireland. Oats were perceived as inferior to barley and wheat in both social and economic terms. This preference, however, has not before been demonstrated in real terms. Interestingly, although further analysis is required, this account suggests that the preference for oats may have been due to cultural taste, rather than driven by purely economic factors. In April 1565, the price of oats was considerably more than barley, and yet the proctor persisted in brewing with oats.

³⁸ Clarkson and Crawford, *Feast and Famine*, 19.

³⁹ Raymond Gillespie, *The Proctor's Accounts of Peter Lewis, 1564-1565* (Dublin: Four Courts Press, 1996).

⁴⁰ Fitzwilliam Manuscripts (Irish), Northamptonshire Record Office: 30; 31; 50; 51; 56; D'Lisle and Dudley, Penhurst MSS U1475 025/2.

⁴¹ See for example Muldrew, *Food, Energy and the Creation of Industriousness*.

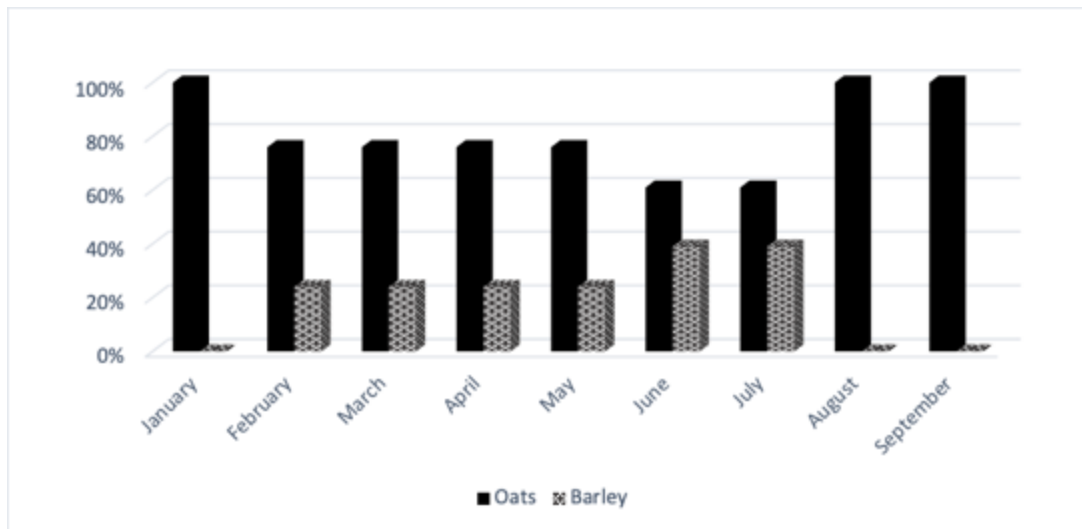


Figure 4: Relative components of grain used in beer brewing (lbs), 1565. Source: Proctor's Accounts of Peter Lewis, 1564-65 (Trinity College Dublin)

Certainly, these trends must to be examined in more detail, but may be of significance with regards to establishing the relative health and stamina of, for example, labourers/soldiers in different regions of Britain and Ireland and further afield, along with the significance of broader social debate surrounding levels of inebriation in this period.

Understanding the significance of beer production and consumption cannot be achieved through a monodisciplinary approach. This applies to scholars attempting to recreate “ancient” beers without any historical evidence of the relative ingredients used, or the brewing processes of the period in question. It equally applies to the problem of attempting to calculate the nutritional value/alcohol content of beers based on quantitative documentary evidence alone, without any engagement with the brewing process and, even more so, with the tendency in some studies to try to establish the dietetic value of early modern food and drink using modern equivalents.⁴² It is clearly not possible to establish the alcohol, protein or calorie profile of historic beer based solely on the calculation of the relative volumes of the various grain used to make it. In addition, brewing, malting and milling equipment, associated techniques, and of course, the quality of the grain itself, were markedly different in the sixteenth and seventeenth centuries. The implications for these differences on the brewing process, and therefore the properties of the final product, can only be reasonably assessed through a systematic reconstruction and analysis of each stage in the brewing process.

⁴² Harvey, *Living and Dying in England, 1100-1540*; Patrick W. Hayes, John Al Matthews, Bernard Allaire & Poul Holm, “European naval diets in the sixteenth century: A quantitative method for comparative and nutritional analysis”, *Historical Methods: A Journal of Quantitative and Interdisciplinary History*, 52, no 4 (2019): 195-212.

With these issues in mind and in an effort to exploit the significant potential of the written sources, the project integrates documentary investigation including household accounts; brewing directions; housewifery guides and recipe books with experimental archaeological techniques and scientific analysis to undertake a comprehensive interdisciplinary investigation of the nature of early modern beer. The processes incorporated include the identification, sourcing, growing and harvesting of “heritage” grains, hops and yeast; malting through traditional floor malting techniques; milling, by comparing results of quern and water mill technology; coopering; coppersmithing; brewing and casking. Participating individuals and institutions/organisations include artisan grain and hop producers, specialist coopers and coppersmiths; milling experts; a folk life museum and working watermill; a commercial floor malting company; experimental brewers, historians, environmental- and bio-archaeologists.

The bioarchaeological component of this experiment is particularly groundbreaking. Archaeologists have recently begun to apply biomolecular methods to explore the environmental and cultural aspects of past human behaviour such as residential mobility, diet, breastfeeding practices, and health. Much yet remains to be understood about how such data can be interpreted. For example, oxygen isotope analysis is used to track human mobility across climatic zones but is fundamentally dependent on people retaining a link to the rain (and hence drinking water) that falls in their place of origin, as most of the oxygen in a human skeleton derives from ingested fluids. However, it is a simplistic assumption that humans throughout history only, or primarily, drank fresh, unaltered rainwater. Brettell et al. demonstrated that a significant difference exists between the oxygen isotope ratio of modern beer (Timothy Taylors Landlord, a classic pale ale) and the fresh spring water used to brew it. A similar shift was observed in water boiled for hot drinks. The opportunity presented here to replicate this study on beer brewed using historically accurate ingredients, equipment and processes will provide valuable evidence to assist in the valid interpretation of such data when investigating residential origins, and explore how and if drinking most, if not all, fluids from beer will sever the link between humans and their place of origin. A further question of interest is whether, the analysis of oxygen isotopes, can help distinguish intra-community dietary variation related to the amount of beer or other modified liquids relative to fresh water consumed by individuals.⁴³

Drawing together this range of expertise is clearly a challenging endeavour. Nonetheless, this experiment is an ideal opportunity to explore the potential for knowledge exchange across diverse academic and non-academic interests, brought together with the express aim of addressing one clearly defined historiographical issue. As such this discrete study serves as a microcosm for the wider project methodology,

⁴³ See: Rhea Brettell, Janet Montgomery and Jane Evans, “Brewing and stewing: the effect of culturally mediated behaviour on the oxygen isotope composition of ingested fluids and the implications for human provenance studies”, *Journal of Analytical Atomic Spectrometry* 27, no 5 (May, 2012): 778-785.

which aims to integrate at the deepest and most coherent level, various approaches to the problem of pre-modern diet.

Zooarchaeology

The second archaeological approach used to help interpret the historical evidence is zooarchaeology, or the analysis of excavated animal bone. As noted above, household accounts can shed interesting light on trends in the consumption of fish, flesh, and fowl, albeit in limited and generally atypical institutional settings. These trends, however, are very useful in developing a framework of analysis and establishing a core set of questions that can then be addressed through the collation, mapping and modelling the of animal bone data, as outlined above. Areas for research might include the extent to which the meat in the diet varies between English and Irish households in Ireland; whether rural sites show similar patterns of meat consumption to urban; whether new “exotic” meats, such as turkey, are found in any contexts other than elite institutions; and also, the social or religious contexts in which particular types of meat consumption predominate.

There is, however, further benefit to incorporating zooarchaeological approaches to investigate dietary trends. One of the key methodological challenges of using household accounts to examine nutrition, specifically establishing the macro-nutrients and calories available from different types of meat, or meat relative to other food stuffs, is the conversion of the volumes of various foods into a common unit. Accounts tend to record the number of carcasses of cattle, sheep etc. consumed over specific periods of time, but provide no indication of the edible quantities of meat on those carcasses. Since, cattle produce more meat than sheep, directly comparing the number of carcasses consumed is a pointless exercise. Also of limited use are efforts to compare the relative amounts of money spent on different types of food, since some foods cost more than others and prices fluctuate over time.⁴⁴ The only way to undertake meaningful analysis of any quantitative record for food consumption is to establish the average edible weight of each type of recorded food. Despite significant recent advances in standardising both the retrieval and recording of excavated zooarchaeological material, this data is not yet available for Irish animals. This means that, at present, any dietary analysis must rely on data derived from animals in other countries.⁴⁵

The purpose of this zooarchaeological component of the project is, at the most basic level, to exploit the bone metrical data collated through the *Mapping Diet* database, to

⁴⁴ For example, Clarkson and Crawford, *Feast and Famine*, 22.

⁴⁵ Barbara Harvey has produced a list of the edible volumes of meat for a range of animals based on figures from French and Scottish sources. See Harvey, *Living and Dying*, 228. For discussion, disagreement, and revision of the data, see Dawson, *Plenti and Grase*, 82-114. See also A.J.S. Gibson, “The size and weight of cattle and sheep in early modern Scotland”, *Agricultural History Review* 36, no 2 (1988): 162-71.

establish average animal sizes and associated meat weights and potentially, the extent to which these changed over time as a result of agricultural “improvement”. This data can then be cross-referenced with quantitative historical sources, especially household and institutional provisioning accounts, to both help to better understand the relative importance of meat to diets and also to establish a baseline set of data that can be utilised comparatively to enlarge our understanding of consumption practices in other countries. Zooarchaeological input will also incorporate estimates of dairy production through the analysis of sexing and aging data. In addition, the analysis of human agency, apparent through butchering marks and burning etc. will be considered to further our understanding of how specific types/cuts of meat were processed, cooked, and eaten. This, in turn can be compared to evidence in the household accounts, but also in the context of early modern dietetic literature, to examine Irish engagement with contemporary food ideologies. Together then, this integrated interdisciplinary evidence will facilitate a more detailed and accurate analysis of the role of animal produce at different social levels, and in varying seasons and regions in Ireland.

Molecular Archaeological Science: Organic Residue and Multi-Isotope Analysis

Mapping and analysis of food-related archaeological evidence is a vital step in reconstructing dietary trends. The identification and collation of early modern biological remains and objects also presents a unique opportunity to implement a suite of scientific methods to help to further elucidate regional/social habits and practises and redress the imbalances and limitations of the historical evidence.

Organic Residue Analysis

The first method deployed is the scientific analysis of the absorbed organic residues from pottery (ORA), a technique generally known for its role in identifying which food products were processed or stored in ancient ceramic vessels.⁴⁶ More recent applications of the technique, however, have highlighted its potential to address broader issues regarding pre-modern food trades, technologies, dietary reconstructions and subsistence practices, from an “individual site context to national and global scale questions.”⁴⁷ While most work still focusses on the prehistoric period, there have been recent efforts, at a case study level, to extend analysis to the medieval period, and slightly beyond.⁴⁸

⁴⁶ For an overview see: <https://content.historicengland.org.uk/images-books/publications/organic-residue-analysis-and-archaeology/heag058a-organic-residue-analysis-and-archaeology-guidance.pdf/>

⁴⁷ Ibid.

⁴⁸ For an important medieval diet lipid paper see: Richard Evershed, Carl Heron and L. John Goad, “Epicuticular wax components preserved in potsherds as chemical indicators of leafy vegetables in ancient diets”, *Antiquity* 65 (1991): 540-544. For a current case study approach in Oxford that integrates ORA with other archaeological techniques to examine dietary change: Url: <http://www.cardiff.ac.uk/news/view/483854-food-culture-after-1066>. See also: Julie Dunne, Andy

Recent work has demonstrated the immense value of the technique in an Irish context. A project led by Dr Jessica Smyth (SCHERD), for example, has analysed vessels from a range of Neolithic sites to address broad questions in relation to diet and subsistence, during what archaeologists recognise as another period of increasing social complexity and economic change across Europe.⁴⁹ It has been found that environmental conditions in Ireland make this a particularly viable approach. Acidic soil and a temperate climate mean that whilst animal bone is relatively poorly preserved, lipid survival is excellent, even for the prehistoric period. The inclusion of this technique in the FoodCult methodology will test the value of lipid residue analysis in establishing broad comparative trends in consumption and material culture in the sixteenth and seventeenth centuries. It will represent the first major application of the technique to the early modern period in any context. This is because, until recently, it was believed that changing production processes from the late middle ages onwards, which included the increasing use of non-porous glazing on the surface of vessels, meant that these ceramics, in contrast to earlier types, did not absorb substances. Recent research, however, demonstrates that such glazes could exhibit imperfections due to the production process, and that these imperfections “allowed the ceramic matrix to trap residues of the food contained in the vessels”.⁵⁰ Glazed ceramics can, therefore, be studied to recover information regarding ceramic use and dietary practices in the early modern period, when such wares were very common. The application of the technique in an early modern Irish context presents particularly interesting opportunities because a) the abundance of recently excavated and well-preserved pottery that, in contrast to the prehistoric period, can be reasonably accurately dated; b) results can be contextualised with documentary evidence, both

Chapman; Paul Blinkhorn and Richard P. Evershed, “Reconciling organic residue analysis, faunal, archaeobotanical and historical records: Diet and the medieval peasant at West Cotton, Raunds, Northamptonshire”, *Journal of Archaeological Science* 107 (2019): 58-70. For a sixteenth-century study see: Maxime Poulain, Jan Baeten, Wim De Clercq and Dirk De Vos, “Dietary practices at the castle of Middelburg, Belgium: Organic residue analysis of 16th- to 17th-century ceramics”, in *Journal of Archaeological Science*, Volume 67 (March 2016): 32-42 ; Julie Dunne, Andy Chapman, Paul Blinkhorn and Richard P. Evershed “Reconciling organic residue analysis, faunal, archaeobotanical and historical records: Diet and the medieval peasant at West Cotton, Raunds, Northamptonshire”, *Journal of Archaeological Science* 107 (2019): 58-70.

⁴⁹ Jessica Smyth and Richard Evershed, “Milking the megafauna: the role of organic residue analysis in understanding early farming practice”, in *Environmental Archaeology*, Volume 21, no 3 (2016); Jessica Smyth and Richard Evershed, “The molecules of meals: new insight into Neolithic foodways”, *Proceedings of the Royal Irish Academy, Proceedings of the Royal Irish Academy: Archaeology, Culture, History, Literature* 115C (2015): 27-46; Jessica Smyth and Richard Evershed, “Pottery, archaeology and chemistry: contents and context” in Alastair Whittle and Penny Bickle, eds., *Early Farmers: The View from Archaeology and Science* Proceedings of the British Academy, 198 (2014): 347-367.

⁵⁰ Alessandra Pecci, Eva Degl’Innocenti, Gianluca Giorgi *et al.* “Organic residue analysis of experimental, medieval, and post-medieval glazed ceramics”, *Archaeological and Anthropological Sciences* 8 (2016): 879–890.

quantitative and qualitative; c) it can address questions in relation to food production and consumption and trade and globalisation.

j) Food Production and Consumption

ORA facilitates the characterisation of residues in relation to terrestrial animal fats. Isotopic approaches then enable the further distinction between ruminant and non-ruminant fats, and carcass fats from dairy fats. Likewise, it is possible to isolate various aquatic fats and certain plant oils. In broad dietary terms, this enables assessment of the relative consumption of meat, fish and dairy products (in the context of pot-based foods) across different regions and within different social, occupational and ethnic contexts. Scholars have typically assumed that the medieval and early modern Gaelic Irish diet was fundamentally different to the English diet, with a greater emphasis on dairy, pork and oats contrasting with a beef and wheat-based diet.⁵¹ In England, and throughout Europe, dairy consumption was traditionally associated with the lower classes and therefore Gaelic patterns of consumption, and their relationships with their cows, were viewed as “barbarous” and backward by English commentators. Recent zooarchaeological analysis of Irish assemblages has started to question this simplistic narrative, demonstrating more diversity of approach to diet.⁵² Likewise, from a historiographical perspective, evidence for the diet of English elites in Ireland, found in household accounts, suggests the increasing status of cheese in the late sixteenth century.⁵³ Lipid analysis is used here in conjunction with detailed zooarchaeological analysis, as outlined above, to facilitate, at a complex level, the contexts for meat and dairy consumption in this period. The findings will inform not just the overall analysis of dietary components but, in broader terms, will also further our understanding of the relative importance of pastoral versus arable economies in Ireland under the influence of colonisation and “improvement” from the later sixteenth century. The analysis, in cultural terms, will also potentially deepen the discussion of emergent “national” food identities in this period.

ii) Trade and Globalisation

ORA, through the detection of molecular markers such as resins from “exotic” goods, also provides information about overseas trade and as such, can be used to identify trade networks and the diffusion of new tastes and fashions. Here, it will be used to further test the documentary evidence that suggests sixteenth-century Ireland, despite

⁵¹ Anthony T. Lucas, “Irish food before the potato”, *Gwerin: A Half-Yearly journal of Folk Life* 3, no 2 (1960): 8-43.

⁵² See Fiona Beglane, “The faunal remains from Bective Abbey”, in Geraldine Stout and Matthew Stout eds. *The Bective Abbey Project, County Meath: Excavations 2009-2012* (Bray: Wordwell, 2016), 126-69.

⁵³ Fitzwilliam Manuscripts (Irish), Northamptonshire Record Office: “Declaration of the Account of Alexander Westlake gent. Treasurer and Steward of the Household, 20 Apr 1590 4 Apr 1591”.

the standard narrative of its economic backwardness, played a vibrant part in early modern globalisation.⁵⁴ Likewise, trends in material consumption can also be established using ORA. Analysis of vessel use, for example, can shed light on specialisation and commodification associated with the development of a consumer economy. These trends are clearly indicated by the historical analysis, and the ability to assess not just the origin of post-medieval Irish pottery sherds, but also their function, will facilitate a deeper understanding of developments in consumption tastes and practices during this formative period.⁵⁵ One further benefit of the analysis of organic residues is the potential to obtain direct radiocarbon dates for the foodstuffs processed in vessels. This relatively new technique, developed in Bristol, consists of compound-specific dating of fatty acids extracted from vessels.⁵⁶ In combination with vessel dates obtained from stratigraphy, vessel form and decorative features, this new evidence may help us to further understand the life-cycle of early modern ceramics, including, for example the length of time they remained in use.

Multi-Isotope Analysis

Collectively, all the interdisciplinary approaches outlined thus far will present a generalised picture of the components of diet at the level of individual household/institution and domestic assemblage. The second scientific approach utilised here, multi-isotope analysis, aims to narrow the scale of analysis, by approaching dietary reconstruction from the level of individual human skeleton.

Over the past 30 years, isotope analysis has become widely used as an archaeological tool for population mobility and palaeodietary reconstruction, particularly in relation to prehistoric subsistence. Of late, its use has been extended in a British context, to the medieval period and in a European context, slightly beyond, to the sixteenth century, in studies that integrate scientific and historiographical methods to explore individual dietary variations amongst different populations and social groups.⁵⁷ Such studies have

⁵⁴ Flavin, Consumption

⁵⁵ *Ibid.*

⁵⁶ Emmanuelle Casanova, Timothy D. J. Knowles, Christopher Williams, Mathew P. Crump, Richard P. Evershed, "Use of a 700 MHz NMR Microcryoprobe for the identification and quantification of exogenous carbon in compounds purified by preparative capillary gas chromatography for radiocarbon determinations", *Anal. Chem.* 89 (2017): 7090–7098; Emmanuelle Casanova, Timothy D.J. Knowles, Christopher Williams, Mathew P. Crump, Richard P. Evershed, "Practical considerations in high-precision compound-specific radiocarbon analyses: eliminating the effects of solvent and sample cross-contamination on accuracy and precision", *Anal. Chem.* 90 (2018): 11025–11032.

⁵⁷ Gundula Müldner and Michael P. Richards, "Fast or feast: reconstructing diet in later medieval England by stable isotope analysis", *J. Arch. Sci.* 32 (2005): 39–48; Simon Mays, "Carbon stable isotope ratios in medieval and later human skeletons from Northern England", *J. Arch. Sci.* 14 (1997): 561–567; Michael P. Richards et al. "Stable carbon and nitrogen isotope values of bone and teeth reflect weaning age at the medieval Wharram Percy Site", *American Journal of Physical Anthropology* 119 (2002): 205–210; For a comparative Scottish analysis see: Angela Lamb et al. "Multi-isotope analysis of the population of the lost medieval village of Auldham, East Lothian,

shed light on issues including the impact of religious observance on comparative ethnic food-ways; varying social, occupational and geographic patterns of consumption; and the diffusion of new crops and foodstuffs in diverse regions and economies.

In Ireland, this approach has been slower to gain ground, but in the past five years, there has been a significant proliferation of isotopic studies in Irish bioarchaeology, addressing a range of topics from prehistoric mobility to paleo-dietary issues spanning the Neolithic to Post-Medieval periods.⁵⁸ As with general archaeological trends, work thus far has focussed mainly on the prehistoric periods, and while there has been some recent examination of the medieval period and on the Great Famine of the nineteenth century, to date, the early modern period remains entirely unexplored. The integration of this approach into FoodCult will utilise new scientific methods in Irish studies to address a neglected period in the dietary and mobility history of the country, and one which benefits in a unique way from the advantages of this specific approach.

The study will utilise a suite of isotopes to firstly broadly establish the population composition of various sites (strontium and oxygen isotopes) and secondly to examine comparative dietary behaviour (carbon, nitrogen and sulphur isotopes) in relation to four issues especially pertinent in an early modern Irish context: a) migratory and settlement patterns in relation to individual sites and the distinction of dietary consumption in relation to geographical origin. (strontium and oxygen); b) impact of religious belief, social class and geographic location on the components of diet, potentially identifiable through the distinction between terrestrial and marine-based; c) impact of war (scorched earth and siege warfare and resultant famine) on diet in a comparative context, and comparative diets of English, Scottish and Irish soldiery; d) potentially, as noted above, the impact of specific consumption practices, identified in historic sources, such as high alcohol consumption, on human tissue (e.g. beer/grain on oxygen isotopes).

Scotland”, *Journal of Analytical Atomic Spectrometry* (2012): 765-777; For sixteenth-century Spain see: Michelle M Alexander et al, “Diet, society, and economy in late medieval Spain: Stable isotope evidence from Muslims and Christians from Gandía, Valencia”, *American Journal of Physical Anthropology* 156, no 2 (2015): 263-273.

⁵⁸ For the prehistoric see: Jacqueline Cahill Wilson, et al. “Mobility and migration in late Iron Age and early Medieval Ireland”, *Journal of Archaeological Science: Reports*, 6 (2016): 230-241. For the medieval period, see: Jacqueline Wilson, et al. “Strontium and oxygen isotope analysis from High Island, Co. Galway”, in Georgina Scally ed., *High Island-Ard Oilean, Connemara, Co. Galway: Excavation of an Early Medieval Monastery on an Atlantic Irish Island* (Dublin: Department of Environment Monograph Series, 2012), 236-238; Catriona McKenzie, Eileen Murphy, Eric Guiry, Colm Donnelly, Fiona Beglane. “Diet in Medieval Gaelic Ireland: A multiproxy study of the human remains from Ballyhanna, Co. Donegal”, *Journal of Archaeological Science*, 121 (2020). For a nineteenth-century Anglo-Irish context, see Julia Beaumont et al., “Victims and survivors: stable isotopes used to identify migrants from the Great Irish Famine to 19th Century London”, *American Journal of Physical Anthropology* 150 (2013): 87-98; Julia Beaumont and Janet Montgomery, “The Great Irish Famine: identifying starvation in the tissues of victims using stable isotope analysis of bone and incremental dentine collagen”, *PLoS ONE* 11(8): e0160065. 5.

Multi-Isotope and Organic Residue Analysis Sampling Strategy

For isotope analysis, the project adopts a modified version of the selection methods used by Müldner and Richards for medieval England; Beaumont and Montgomery for nineteenth-century Ireland, and Montgomery *et al.* for strontium and oxygen.⁵⁹ A scoping project is currently underway to identify potential archaeological sites with human remains dated to the period c. 1550-1650. The final selection for sampling will include a range of, ideally, 8-10 discrete archaeological sites, representing diverse functions and social/ethnic groups. The selection of specific skeletons will be based on criteria including a) the availability of suitable samples of tooth and bone, b) represented demographic range, c) survival of contextual botanical, faunal and especially artefactual (object) evidence, d) supporting historical primary source material, e) potential to add value to the broader understanding of the site context, especially in relation to settlement patterns.

Ideally, the range will include a rural settlement; Plantation town or settlement; a Gaelic burial site; English and Irish garrisons and a port town, which have been subjected to previous or ongoing excavation. Potential sites under consideration currently include: a cemetery at Mullagh Co. Longfort (50 burials, possibly Protestant settlers); a Friary at Dunmore, Co. Galway (340 burials); Bagenal's Castle. Co. Down (33 burials); Smithfield, Dublin (27 burials, possibly mid-17th C executions); Clogh Oughter Castle, Co. Cavan (burials associated with 17th C Siege); King John's Castle, Limerick (burials, including juveniles, associated with 17th C siege); St Mary's Church, Kilkenny (10 urban burials); Clonmel, Town Hall, Co. Tipperary (10 burials, possible prison).

The purpose of this is to extend the study beyond an overarching picture of diet in diverse communities, to illuminate the diets of specific people and at specific times in their lives. The selection method is designed to use the science to fill gaps in the historical data. For example, whilst there are very detailed records of the diet of the Elizabethan soldiery in Ireland, comparative records do not exist in a Gaelic Irish context. Focusing the isotope analysis on garrison/siege sites, if possible, will allow a level of comparative analysis not possible from the historical material alone. This focus will also facilitate comparative analysis with other recent isotope case studies, particularly, those relating to Scottish soldiers buried in Durham, and at Bedlam in London.⁶⁰

⁵⁹ Müldner and Richards, "Fast or feast"; Janet Montgomery, "Passports from the past: investigating human dispersals using strontium isotope analysis of tooth enamel", *Annals of Human Biology*, 37 (3): 325-346; Beaumont and Montgomery, "The Great Irish Famine"; Janet Montgomery *et al.* "Finding Vikings with isotope analysis – the view from wet and windy islands", *Journal of the North Atlantic*, 7 (2014): 54-70.

⁶⁰ New projects using isotope analysis, in both cases undertaken by FoodCult team member Janet Montgomery include: *The Scottish Soldiers Project* at: <https://www.dur.ac.uk/archaeology/research/projects/europe/pg-skeletons/> and *The New Churchyard, from Moorfields Marsh to Bethlam Burial Ground* (London, 2018).

The methodology applied in the ORA element will also use a broad sampling regime, based around the availability of pottery samples and the survival of contextual archaeological and historical material. The range, form, and date of pottery types potentially available for ORA study is currently being populated in the *Mapping Diet* database. The selection will include samples of both local made and imported wares. A range of 20-30 sherds will be selected from vessels associated with a range of representative sites (c. 10 sites). Potential sites include: Mogeely Castle, Co. Cork (Tudor Colonial); Carrickfergus Town Hall, Co Antrim (Plantation settlement); Rothe House, Co. Kilkenny (Merchant's house); Dublin Castle; Salterstown, Co. Derry (Plantation settlement); Clogh Oughter Castle, Co. Cavan (Garrison); Sherkin Island, Co. Cork (Friary with imported wares).⁶¹ Every effort will be made to align the sites chosen for organic residue analysis with those selected for isotope analysis, so allowing for the development of multi-layered interdisciplinary case studies.

The 'Meaning of Food' in Early Modern Ireland

In tandem with the approaches outlined thus far, a final key component of the FoodCult methodology is the historiographical study of the relationship between food consumption, social distinctions, and interactions in an Irish context. This approach seeks to explore and contextualise the consumption trends identified through the methods outlined above, to situate Irish practices in the context of wider historiographical themes. The study will examine a range of descriptive and prescriptive literary, and diverse other qualitative historical sources, to understand food identities and social/cultural interactions in Ireland. Ireland will be presented as a case study for the broader examination of emergent "national" food identities; exploring how communities projected and received images of themselves and others through their diet and rituals of consumption. As such the analysis will enhance recent English historiography, where the subject of food identity focusses largely on the domestic, to the exclusion of intercultural influences.⁶² While the impact of colonisation on food ideologies is important, the study will move beyond this narrative to present a complex comparative view of the "meaning" of food. There is a tendency in Irish historiography, to conflate issues of gender, class, and religious identity in a colonial context. This study, modelling the approaches and questions currently in vogue in food broader historiographies, will ameliorate this problem by situating Irish gender and social food identities in the wider context of European developments. Likewise, it will seek to complicate the colonial narrative of "English" and "Irish" identities, by exploring descriptions of diet in a comparative European context. Finally, it will explore food as a site for social and cultural interaction. It will consider comparative practices of food provisioning and exchange in local economies, including

⁶¹ <https://www.southernstar.ie/news/16th-century-chinese-porcelain-discovered-on-sherkin-island-4164544>

⁶² Lloyd, Food and Identity in England.

centres of colonial power, and the “meaning” of food in the negotiation of political, cultural and gender identities. It will also examine the use of food to control diverse social, ethnic, and religious groups, thereby situating Irish foodways within a broader European narrative of sumptuary regulation in this formative period.

Outcomes and Significance

The FoodCult methodology approaches food from a deeply integrated perspective, connecting quantitative and qualitative historiographical and archaeological approaches with emergent scientific methods to develop a sustained interdisciplinary approach to food. To date, studies of food have tended to focus on either representative diets or the realities of food consumption. By exploring both aspects within a tightly constructed analytical framework, the project will help to distinguish the actual and ideological bases for food-related stereotypes in the construction of early modern foodways. In so doing, it will further our understanding of the significance of food in complex societies: demonstrating the impact of colonisation/warfare on diets; illuminating complex processes of acculturation, and broadening, for the first time, our perception of Irish food beyond the colonial narrative (and the potato!). Combined, the approaches outlined above will shed light on all the factors that underpinned diet, including social class; religious belief; globalisation; ideological trends; environmental factors and market access, whilst helping to ameliorate the limitations of discrete analytical approaches.

While a core aim of the project is the development of a new field of study in an early modern Irish context, the project methodology is innately interoperable across diverse chronological periods and geographical contexts. Successful completion will open significant opportunities for collaborative research in an Irish context and far beyond, increasing the utility of the various scientific approaches and making available and accessible core tools for further research. The construction of the *Mapping Diet* database, for example, will generate a crucial resource, facilitating a wide range of further projects in the fields of archaeology and history, examining specific foods, objects, or industries. The emphasis on technological compatibility with other projects means that this data can be combined within future open-access and Big Data archaeological initiatives, to enable comparative studies across space and time.

It is anticipated that a project of this scale and level of interdisciplinarity will present numerous challenges around issues of methodological integration, analysis, and dissemination. In this regard, the methodology, as outlined, is flexible and will be adapted, as required, to incorporate varying levels and quality of data and new discoveries, as they emerge. Likewise, the final dissemination strategy remains open to modification. The key emphasis, however, is on moving the practice of “interdisciplinarity” beyond the basic sharing of space in edited volumes, through the exploration of new integrative approaches. This will be achieved through a strategy that prioritises areas/issues/questions with optimum potential for interdisciplinary

investigation. This includes, for example, the exploration of specific processes such as brewing, which, as outlined above, lends itself particularly well to multiple approaches; the deep analysis of case-study sites where good levels of preservation of multiple lines of evidence make the layering of interdisciplinary approaches possible; or the overlap of approaches to address specific research questions, such as integrating zooarchaeological methods and quantitative evidence to examine trends in meat consumption. Regardless of the final mode of diffusion, the key significance of the FoodCult project will be its value in demonstrating the enormous potential for the humanities, and particularly history-led interdisciplinarity, to address core intellectual challenges.⁶³

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⁶³ On the challenges and barriers to humanities-led interdisciplinarity see the Shape ID project: <https://www.shapeid.eu/about/>

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