

Main Themes

- The path from Sacred to Secular
- How it shaped and shapes Trade
- Fortification as an essential element to wine trade
- Technology and agricultural aspects -> Quality
- Wine diversity- Choices, choices everywhere
- New World vs Old World vs Real World

2

What is wine?

- The word Wine is of Proto-Indo-European (PIE) stem woī-no
- Fermented juice of grapes
- Made primarily from vitis vinifera

Grape genera and species

- 17 Genera?
- 60-70 species
- Vitis Vinifera- hermaphrodite 5,000-10,000 varieties: i.e. Chardonnay
- Vitis Riperia- America
- Vitis Labrusca- America
- Vitis Belandieri- Americ
- Vitis Rupestris- America
- Vitis Amunerensis -Asia
- Genus Muscadinia
 - Vitis rotundifolia- America
- Hybrids and Crosses Seyval Blanc vs Pinotage or Chardonnay

4

Types of Wine

- Light (Still) Wines- White, Red, Rosé, Orange
- Sparkling Wines- ie Champagne, Cava, Crémants, Méthode Rurale, Pét Nat, Charmat method, Prosecco.
- Fortified Wines- ie Port, Madeira, Marsala, Sherry, VDN, Topaque
- Aromatized Wines- ie Vermouth, Lillet, Chinato, Byrrh

5

• 500 million BCE Ampelopsis (peppervine or porcelain berry)

Pre-history

- 200 milion BCE postulated appearance of Vitis Vinifera Sylvestris
- 50 million BCE Fossilized remains of Vitis Vinifera Sylvestris
- 200, 000 BCE postulated appearance of white mutations

7

First Human Traces of Vitis Vinifera Use

- 21,000 BCE Vitis Vinifera at Ohalo II site in SE Galilee
- emmer wheat
 wild almond

wild pistachio wild olive

flowers

Proc Natl Acad Sci U S A. 2004 Apr 27; 101(17): 6821–6826. Published online 2004 Apr 16. doi: 10.1073/pnas.03085571

8

Wine and its determinant role

- Ethanol and interaction with other animal species 17 species including bonobos, chimps, birds, native Malay tree shrews
- The gene ADH4 10 million years ago
- Its key psychotropic aspect- (psychedelic peptides from monkey frogs, anyone?)
- The discovery of wine vs beer vs chicha etc
- pre-Neolithic and Neolithic 10,000-13,000 years
- 13,000BCE Traces of Calcium oxalate in Raqefet Israel
- Wine as a sacred object. What do we mean by sacred? Taboo
- Its role in the evolution of religion

The Magic of Wine from Eurasia to China

- Grapes naturally ferment via saccharomyces cerevisiae
- Fermentation role of yeast-not understood until 1860's by Louis Pasteur
- Wine would spoil -> vulnerable to acetobacter -> vinegar
- The blending of hawthorn, wine with honey and rice in Jiahu China in 7000BCE. Similar evidence in Near East/ Mesopotamia. Why?
- Drinking tubes depicted from Jiahu (China) to Godin Tepe (Zagros Mts in Iran), Egypt, Crete, Ancient Greece
- Associated with funerary and sacred acts- the first buzz?

10

Wine as a perishable product

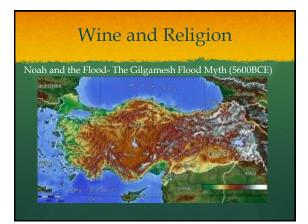
- Figuring out how to slow down or prevent it from turning into VINEGAR
- Adding ingredients to retard the process, sealing it, temperature control
- Selecting higher acid varieties
- Leaving residual sugar a preservative
- Later fortification

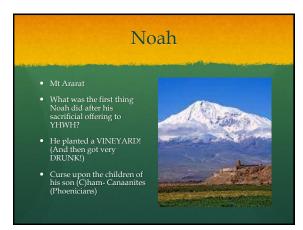
11

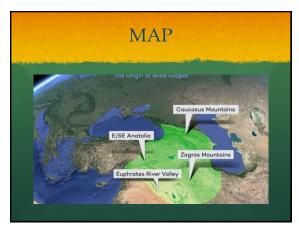
From the Sacred to Consumer Good

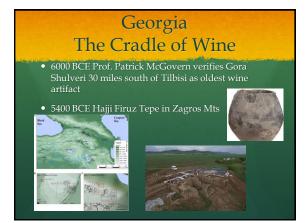
- 6000 BCE -5000 BCE Georgia, Iran and Sumeria
- 4000 BCE- 3100 BCE Wine in Canaan (later Phoenicia)
- 3200 BCE -2700 BCE Ancient Egypt mostly imported
- 1700 BCE 1500 BCE Earliest Sanskrit wine references
- 1600 BCE Wine in Ancient Greece via Crete
- Wine in Graecia Magna and Etrusca and Ancient Rome
- Wine in Judaism- the Kiddush at Shabbat
- Wine in Christianity Communion
- Wine and Islam

The Juicy Part of the Wine Story begins • 8500 BCE Armenia, Azerbaijan, Georgia, Turkey grapes and distinct varieties develop. Why? • 7000-6600 BCE First known 'wine' in Neolithic village of Jiahu, China- Patrick McGovern











Armenia 4000 BCE Oldest discovered winery at Areni

19

Land of Canaan

- Canaan was ideal for viticulture- Land of Eschol. Why?
- 1800 BCE Canaan referred to in Ancient Egypt's The Tale of Sinuhe 'land of more wine than water'
- 'The (2 of 12) spies brought back a cluster of grapes which required the two to carry upon a lever'. Numbers 13:23
- The wine source for the earliest Pharoanic dynasties
- Area ruled by Pharaohs after battle of Meggido 1456 BCE till the Late Bronze Age collapse the seafaring people @ 1200 BCE -1177 BCE

20

Oldest Wine Cellar (to date) in the land of Canaan/ Israel

- 1700 BCE
- 40 jars with 50 liter capacity
- Recipe included:
 - pistachio tree resin
 - Mint
 - · Cinnamon bark
 - Juniper berries

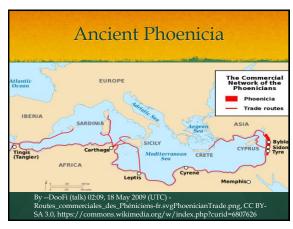




Land of Canaan

- Wine referenced 280 times in the Bible more than any other food or beverage
- Wine as a gift from YHWH
- $\bullet\,$ Israel as the vineyard and YHWH as the vintner
- Garden of Eden myth and the fruit of knowledge- Apple translation -but really fruit or grape (serpents venerated by Canaanites)
- Indigenous varieties include Jandali (w) and Hamdani (w) perhaps called Godali and Haldali in 4th Century

23



Ancient Phoenicia

- Wine brought to the Mediterranean coasts and isles
 - 800 BCE viticulture brought to France, Portugal, Spain
 - 750 BCE Tunisia Carthage
 - 600 BCE Wine introduced to the Gauls Casks
 - 500 BCE Algeria

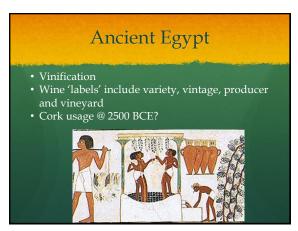
25

Ancient Egypt

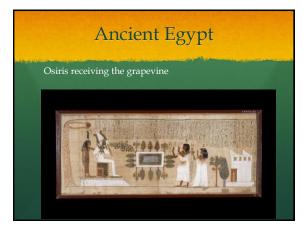
- Irp -ancient Egyptian word for wine
- Religious significance sacred aspect (Semez)
- Wine used as Medicine-> Aromatized wine tradition
- 3150 BCE 700 wine jars from Caanan buried at Scorpion I. Wine is laced with pine resin, figs, herbs, coriander, mint, sage

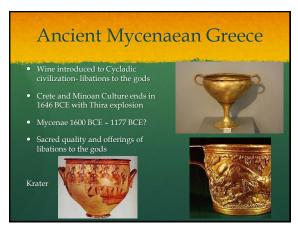
26

Ancient Egypt Pergola trellis system









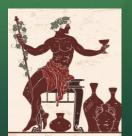
Mycenaean Greece

- Water's potability- origins in Phoenicia
- Limited Water resources in Land of Canaan
- Krater and krasis mixing wine with water
- Pure wine used for medication and embalming fluid
- 'Water first then wine-' Xenophanes 6th C BCE
- Barbarians in part defined by drinking habits

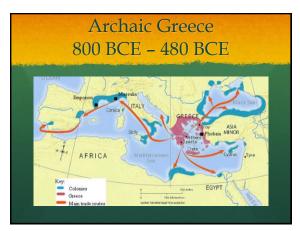
32

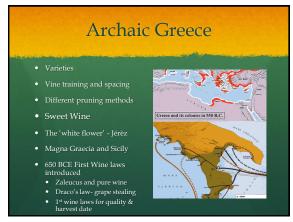
Archaic Greece 800 BCE - 480 BCE

- Mainland Greece's topography, soil and climate
- Olive oil and wine trade as a basis for wealth and power
- Evolution and Roles of Dionysos – resurrected god; the intermediary between the gods and men
- Symposia and bacchanalia



Dionysos with thyrsos







Ancient Greek Wine artifacts • Pithoi - large container to store wine -buried for temperature control

- Amphora used to transport
- Krater for krasis
- Arytaina- ladle with a cup like a venencia
- Phiale a wine drinking bowl

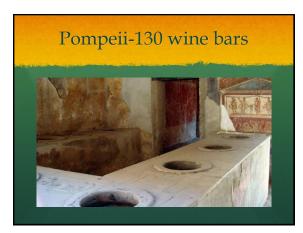


37

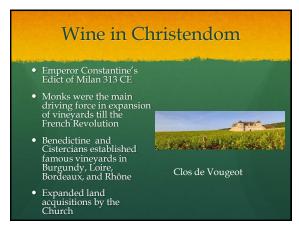
Careek Wine Artifact Skyphos - two handled cuplike a mug Kylix - stemmed cup for symposia Oinochoe - pitcher to transfer wine from a krater Kanthoroi - two handled deep cup Psykter- wine cooler Cyceon - first cocktail (used in the Eleusinian Mysteries)

38

Ancient Rome and Oenotria • Etruscan vs Magna Graecia • Wine becomes a consumer good- Why? • Rome's Population exceeds 1 million -> dependence on wines of Gaul & Iberia • 121 BCE legendary vintage - Opimiam • Falernum • Aglianico, Greco di Tufo • Mastroberardino vineyard in Pompei • Casks as primary mode of transportation and sulfur use (Pliny)







• 802 AD Charlemagne bans leaded wine; selection of Rüdesheim Corton (red beard) • 1001 AD Leif Ericson and Vinland • 1086 AD Domesday Book -40 significant vineyards in England • 1141 AD 1st known Chianti Ricasoli family





Western World • 1455 AD Madeira wine • 1487 AD Use of Sulfur sticks decreed for wine production in Prussia • 1524 AD first plantings in the Americas - Mexico • 1548 AD first plantings in Chile by Pizarro • 1554 Argentina at Santiago del Estero by Fr. Cidrón • Pais/ Criolla Chica/ Mission = Listan Prieto from the Canary Islands?

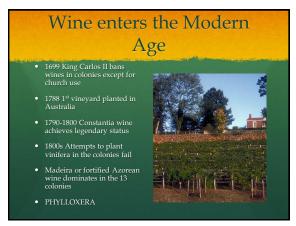
46

• 1590 1st written record of botrytized wine in Tokaj? Or 16067 King of Wines and Wine of Kings • 1615 Ban on charcoal in England- development of coal industry. Heavy glass and Cork use • 1638 1st Port house - trade with British since Treaty of Methuen (Treaty of Windsor 1386)

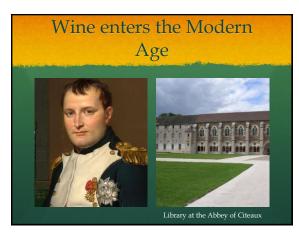
47

Wine enters the Modern Age • 1655 Wine planted in South Africa- victualing station • 1662 Christopher Merret and deliberate production of sparkling wine (Champagne) • Heavy glass usecontrol of fermentation • 1663 Samuel Pepys and "HoBryon'- Branding Stellenbosch South Africa

Fortification & the British Empire Why the spread of Fortified Wine? British consumer demand • Jerez-Xérèz-Sherry • Madeira/ Azores • Port • South African wine (Jerepigo) • Australian -Port now Topaque • Marsala Taste your fortified wine now !!!



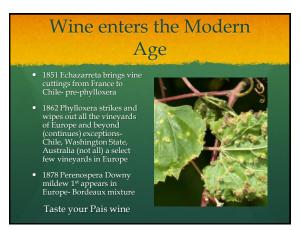
Wine enters the Modern Age 1789 French Revolution and two consequences: Church loses its landsthe rise of négociants Napoleonic Code of inheritance 1801 Chaptalization 1824 1st precise measurement of alcohol



Wine enters the Modern Age 1845-47 Oidium TuckereiPowdery mildew -disaster • Sulfur 1855 Exposition Universelle and the Bordeaux classification Dominance of French wines till the late 20th Century But continued dominance of French varieties

• Native varieties Concord/ Scuppernong/ Norton • Beer and rum -> whiskey drinking culture • 1769 First vines planted in California Junipero Serra • Viewed as an elite beverage • Inability to plant vinifera because of phylloxera • Jefferson and Monticello

Wine in the US 1830 First mention of Zinfandel (Tribidrag/Crljenak Kastelanski/Primitivo) 1852 Agoston Haraszthy-Zinfandel introduction to California 1849- California Gold Rush 1862 Vines number over 8 million in California 1870-1880's Phylloxera strikes California 1906 San Francisco Earthquake and Fire Agoston Haraszthy





Modern Era

- 9 gal spirits avg/person + cider
 /beer
 /beer
- 1920-1933 Prohibition grape production increases
- 1936 AOC laws why?
- 1948 Supertuscans -Sassicaia
- 1954 1st mechanical harvester used (US)
- 1950's Stainless Steel Fermentation use
- 1956 Winter Freeze in Bordeaux



58

Modern Era

- 1957 Zellerbach (Hanzell) and Fr Oak & Dr. Konstantin Frank
- 1958- AxR1 rootstock approved leading to future calamity in CA
- 1959 screw cap for wines-Stelvin closure invented for wine use TCA
- 1966- Robert Mondavi- Christie's wine department and wine auctions- wine becomes an "investment"
- 1971 Varietal labeling in US- Why?
- 1976 The Judgment of Paris
- 1978-79 Wine Advocate and Robert Parker + Wine Spectator
- 1981- Napa Valley 2nd AVA (now 258)

59

Modern era

- Cloudy Bay Sauvignon Tasting in 1980's/ Oregon's Tualatin's Best of Show in London 1984
- 1985- "Anti-freeze" -diethylene glycol scandal in Austria
- 1991 60 Minutes and "The French Wine Paradox" 40% red wine consumption
- 1997- Phylloxera attacks 90% of Napa & Sonoma vineyards
- 2004 Sideways movie- Pinot Noir in US sees exponential growth
- 2006 Fraud becomes prevalent- Bill Koch sues Hardy Rodenstock (Meinhart Görke) later Kurniawan

Present and Future

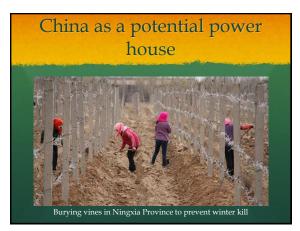
- CLIMATE CHANGE-
 - Fires in Australia and California
 - · Changes in varieties grown in traditional regions*
 - Changes to viticulture & vinification techniques
 (Read Roger Bohmrich's brilliant analysis of impact of projected climate change)
- Homogenization and Industrialization of wine
 - No excuse today for a bad wine -added ingredients
 - · Reaction to the last 60 years
 - Expression of Terroir explosion of choices
 - · Natural wine vs Organic vs Biodynamic wine
 - Orange wine
 - Rosé craze
 - Disappearance of sweet wine traditions

61



62





A sampling of relevant books to read

- Kevin Begos: Tasting the Past
- · Oz Clarke: The History of Wine in 100 bottles
- Arthur George: The Mythology of Wine
- Patrick McGovern: Ancient Wine & Uncorking the Past
- Hugh Johnson's: Story of Wine
- Stavoula Kourakou Malvasia: Vine and Wine in the Ancient Greek World & The renowned wine, Yesterday and Today
- Mark A. Matthews: Terroir and other Myths
- Rod Phillips: Short Story of Wine & French Wine: A History
- Ian Tattersall & Rob Desalle: A Natural History of Wine
- $\bullet \quad \text{Tim Unwin: Wine and Vine: An historical Geography of Viticulture and the Wine Trade} \\$
- Jason Wilson: Godforsaken Grapes

65

