

2013 Chicago Open: No Subtext, Just Tacos.

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1. In one section of this work, Saint Margaret is holding a book and looking at a pot of ointment held by Mary Magdalene while casually stepping on a dragon. It draws on the symbolism of the mass by including three groups of angels respectively wearing the alb, the cope, and the dalmatic, though none of them is wearing the celebrant's chasuble. In the background of this work, the inscription "Here is where Christ was born" appears above a harp on the palace of King (*) David. In this work, a devil lies in shadow behind to an ox raising its head and a donkey lowering its head next to a Roman column. In the central panel of this triptych, a vase and a glass vessel, both filled with flowers, lie in front of a sheaf of wheat, while the naked baby Jesus lies on the bare ground with light shooting out of his body. For 10 points, name this triptych by Hugo van der Goes named for an Italian banker.

ANSWER: Portinari Altarpiece [or the Portinari Triptych]

2. Four new examples of this type of object were reported in 2012 by Travis Rector and Heidi Schweiker in NGC7023, although one object, 450X, thought previously to be another example located in Bok globule B175, has been reclassified as a background galaxy. In the mid-to-late 1990s, several examples were found to be up to 10 parsecs, over 30 times larger than most previously observed examples. Two of this class of objects' discoverers noted their prominent hydrogen, sulfur, and oxygen lines, and Viktor Hambardzumyan named these entities (*) after those two men. An analogue of these structures, which manifests at lower frequencies, is called a Molecular Hydrogen emission-line Object. They were first observed by Sherburne Wesley Burnham, who noted nebulosity around T Tauri, and always occur almost perpendicular to the protoplanetary disk. For 10 points, name these shockwaves in the interstellar medium, formed as narrow jets of hot gas collide with cold dust around newly-born stars.

ANSWER: Herbig-Haro objects

3. In a novel by this author, Boo Boo Bronstein attempts to get himself kidnapped to extort one million dollars from his father. This author received an Oscar nomination for his screenplay adaptation of *Women in Love* and has spent the last few decades on a 3,000 page book called *The American People: A History*. A novel by this author is set in locations like Fire Island and graphically details the use of poppers and Quaaludes through the eyes of writer Fred Lemish. A famous essay of his published in the *Native* started "If this article doesn't scare the shit out of you, we're in real trouble," and was titled (*) "1,112 and counting." In a play, this writer fictionalized himself as Ned Weeks, the lover of the AIDS-stricken Felix Turner. For 10 points, name this author of the controversial novel *Faggots* and the play *The Normal Heart*, a gay activist who helped found ACT UP.

ANSWER: Larry Kramer

4. The article that gave this movement its name was published in *The Weekly Review* under the pen-name "Resolute." A periodical sponsored by this movement dedicated an issue to Henrik Ibsen, in which it published a translation of *A Doll's House*, inspiring a period of "Ibsen Fever." This movement turned violent when members burned down the mansion of the leader of the New Communications group. This movement promoted "Mr. Science" and "Mr. (*) Democracy" under the influence of John Dewey in journals like *New Youth* and *New Tide*. Part of the larger New Culture Movement, this vernacular-championing effort objected to the Twenty-One Demands imposed four years earlier. Its followers had been disillusioned when the Treaty of Versailles allowed the German-controlled Shandong province to pass to Japan. For 10 points, name this student-led anti-imperialist movement in China, named for a day of protest in 1919.

ANSWER: May Fourth Movement [or New Culture Movement until it is read]

5. A reaction that was used in forensics until the mid-1980s to detect nitroglycerin produces these salts as intermediates. The aryl types of these salts can react with hypophosphorous acid or sodium borohydride to replace the functional group that characterizes these salts with a hydrogen atom. Aryl versions react with electron-poor olefins to generate alkylated arenes in the Meerwein arylation. They can also react in the (*) Schiemann reaction to produce an aryl fluoride. These salts are generally used for dye making through a namesake coupling reaction. They are formed by the reaction of sodium nitrite with a primary amine, usually an aniline derivative, in HCl. Discovered by Peter Griess in 1858, these compounds react with a copper(I) salt in the Sandmeyer reaction to produce aryl chlorides, bromides, and cyanides. FTP, name these explosive organic salts that consist of the dinitrogen functional group with a positive charge and that react to eliminate nitrogen gas.
ANSWER: diazonium compounds/salts

6. The pianist Alfred Brendel argued that this composition is a “humorous work in the widest possible sense” in the second half of his essay “Must Classical Music Be Entirely Serious?” The composer of this work referred to its central theme as a “cobbler’s patch.” A five-octave diminished-seventh arpeggio toward the end of this piece’s penultimate movement leads to a strange modulatory passage that returns to C major for the closing minuet. An *Andante* movement in this work in 6/4 time features almost exclusively dotted half-note chords and seemingly unresolved dissonances. One movement of this piece quotes from (*) Leporello’s “Notte e giorno faticar” from Mozart’s *Don Giovanni*, and the penultimate movement is a triple fugue in E-flat major, the only movement not centered on the tonic of C. This piece was published in the *Vaterländischer Künstlerverein* along with single variations on this work’s waltz theme by fifty other composers. For 10 points, name this set of variations for piano, one of the last works of Ludwig van Beethoven.
ANSWER: Diabelli Variations, op. 120 [or 33 Variations on a Waltz by Diabelli or 33 Veränderungen über einen Walzer]

7. The third of these people was known as the “Righteous Sprout” after a book he compiled, while the sixth of these people had his death sentence commuted while he sat in Spalerno Prison. The first holder of this position wrote “The Letter of Repentance” and “The Book of the Average Men,” two sections of his five-part work, the *Tanya*. A later holder of this position established the custom of “Sunday Dollars,” in which people lined up to receive dollar bills from him to give to charity. The best known holder of this title stayed at (*) 770 Eastern Parkway, which is now a pilgrimage site. This title was held by a man whose motorcade struck a child in 1991, leading to the Crown Heights riots. For 10 points, give this title held by members of the Schneerson family, who are at the center of a quasi-messianic branch of proselytizing Chassidic Jews.
ANSWER: Lubavitcher Rebbe [with any word form of “Lubavitch”; or Schneerson before it is read; prompt on rabbis]

8. In the 1990s, the Green Paper called for a conference on this property, which led to ninety-three organizations gathering unsuccessfully under Bruce Lehman without reaching any consensus. Robert C. Binkley was responsible for Harry Lydenberg and Frederic Melcher reaching the Gentlemen’s Agreement of 1935 on this issue. Time-shifting is allowed because of this property, which was also disputed by Williams & Wilkins because of work done by the National Library of Medicine. Joseph Story was responsible in ruling on (*) *Folsom v. Marsh* for setting up this idea, for which he created a four-factor test to judge an action based on its purpose, the amount of it done, and its effect on marketability. Common misconceptions about this property include that it has a ten percent or thirty second rule. For 10 points, name this concept covered by Section 107 of the 1976 Copyright Act that allows for legal reproduction of copyright material.
ANSWER: fair use [or library copying before “time-shifting”; prompt on copyright law]

9. This leader took criticism after his adviser, historian Michael Sturmer, called his country a “land without a history.” This leader came to power after his rival party kicked out their own chancellor for trying to bring in Pershing II missiles as a deterrent to Soviet SS-20’s. This leader successfully fended off a power grab from Johannes Rau despite a four percent drop in party support, in addition to outwitting his in-party rival, Franz Josef Strauss. This non-Canadian led a party with close ties to arms dealer (*) Karlheinz Schreiber. An American president claimed that “those young men are victims...also” to justify accompanying this man into a cemetery at Bitburg. This leader lost control of the Christian Democratic Union for his involvement in the “illegal earnings scandal” that broke in 1999. For 10 points, name this chancellor who presided over German reunification.
ANSWER: Helmut Kohl

10. Hans-Jürgen Syberberg directed a film version of this opera set on the composer's death mask, and this opera is the namesake of a piano-like instrument with four keys used to simulate bells. It is customary in some theaters not to applaud after this opera's first act. Apart from the words "Dienen, dienen," one character is entirely silent in the third act, and the line "here time becomes space" sets in motion the Transformation Music of the first act. A repeated motif describes the title character as "enlightened by compassion" and is sung by a voice from above at the end of Act I. This opera's Act I prelude quotes the (*) Dresden amen, and in Act III the title character baptizes the central female to the accompaniment of the Good Friday Music. Act II of this opera takes place in Klingsor's garden, where the Flower-maidens and Kundry all attempt to seduce the title character, who recoils because he feels compassion for Amfortas's wound. For 10 points, name this last opera of Richard Wagner, whose title "pure fool" is crowned king of the Knights of the Grail.

ANSWER: Parsifal

11. When administered to rats, this hormone both induces growth hormone secretion and upregulates the expression of Fos and EGR-1 in the arcuate nucleus. In one pathway, this compound stimulates AMP-activated protein kinase and Akt leading to increased eNOS expression. n-Octanoylation of its Serine-3 residue by GOAT protein is necessary for its activity, while high serum levels of this hormone were shown to contribute to (*) hyperphagia in Prader-Willi Syndrome. Produced by the P/D1 cells of the fundus and coded for by the GHRL gene, this hormone antagonizes another hormone that is produced in adipose tissue and inhibits neuropeptide Y and agouti-related protein. Secreted by the epsilon cells of the Islets of Langerhans, for 10 points, name this 28 amino acid appetite-stimulating hormone that works in opposition to leptin.

ANSWER: ghrelin

12. A minor cause of this war was the creation of fourteen additional bishops' dioceses as confirmed in the bull *Super Universas*. A naval force active in this war struck medals with the words "Faithful to the king" on one side and a wallet on the other. A commander in this war innovatively spread out his infantry so that his lines were only ten men deep, then had those men volley, run to the back, and reload repeatedly to simulate continuous fire. William (*) de la Marck revived his side's hopes in this war by capturing the nearly-unguarded city of Brill with his pirates, who took their name from a scornful comment by Margaret of Parma's adviser. Antonio de Oquendo lost the naval Battle of the Downs during this war, in which widespread resentment of the Tenth Penny tax increased support for the Sea Beggars. For 10 points, name this war whose Twelve Years' Truce was forced by Maurice of Nassau, who helped achieve his father, William the Silent's dream of independence from Spain.

ANSWER: the Dutch Revolt [or the Eighty Years' War; or the Dutch War of Independence; or equivalents]

13. In *The War of the End of the World*, a character with this condition makes Abbot Joao weep by telling the story of Robert the Devil and becomes the adoptive son of Jurema. One of Turgenev's *Sportsmen's Sketches* is titled for a peasant with this condition, who is nicknamed "the Flea" and has the power to talk to birds; that story is "Kasyan from the Beautiful Lands." A character with this attribute objects to being frequently (*) painted by Master Bernardo. Trippetta has this condition in a story about another character with it who sets eight men in orangutan costumes on fire. Edgar Allan Poe wrote about a jester with this condition in "Hop-Frog;" another character who has this attribute restarts a war by poisoning Il Toro, amongst other jobs he does for his master, an unnamed Italian Prince. For 10 name this condition that affects Piccolino, the title character of a Par Lagerkvist novel, as well as Oskar Matzerath from *The Tin Drum*.

ANSWER: dwarfism [or being a dwarf; or other equivalents; prompt on shortness]

14. This philosopher, who distinguished *emunah* from *pistis*, criticized Carl Rogers in a public debate for producing "individuals" instead of "persons." This philosopher opposed taking polarizing viewpoints in favor of having people open a dialogue on a "narrow ridge." This thinker considers "Kant's three questions" in an essay that proposes changing Kant's "science of man" into a form of philosophical anthropology that considers the "wholeness of (*) man." This author used a picture, a movement, or a species as possible ways in which he could relate to a tree. This author of "What is Man?," who made a controversial Bible translation with Franz Rosenzweig, critiqued philosophers who treated God as an "It" object rather than an "Eternal" subject. For 10 points, name this German-Jewish philosopher and Hasidic scholar who wrote *I and Thou*.

ANSWER: Martin Buber

15. Dennis Pelkis teaches a character to fly a plane in this novel, in which that character saves Emily Barton's life and is nicknamed "Hell's Angel" while working at the World of Darkness. One character in it learns of the Dredgeman's Revelation after reading *The Spiritist's Telegraph* and communicating with the deceased Louis Thanksgiving. The Bird Man pretends to help but then rapes the narrator, whose family practices Carnival (*) Darwinism after their mother Hilola dies of cancer. Along with *Train Dreams* and *The Pale King*, this finalist failed to win the 2012 Pulitzer Prize. It focuses on Ava, Osceola, Kiwi, and Chief Bigtree. For 10 points, name this 2011 novel by Karen Russell about a family that runs a bankrupt alligator-wrestling theme park in the Florida Everglades.

ANSWER: Swamplandia!

16. Diversionary assaults prior to this battle involved a raid by the HMS *Menelaus* and a successful raid that captured Fort Warburton. The losing side at this battle scuttled its gunboats at Pig Point to prevent their capture. Most casualties were caused by the dismounted naval guns of Joshua Barne at this battle, where the mostly-militia forces of one side broke under the fire of (*) Congreve rockets. The victorious side lost its commander soon after at the Battle of North Point. The flight of a government body after this battle was satirized as its namesake "races." At this battle, Robert Ross used troops freed up from the defeat of Napoleon to defeat William Winder. For 10 points, name this major American defeat in the War of 1812 that allowed the British to burn down Washington.

ANSWER: Battle of Bladensburg

17. This character insults Roger when he brings up that Roger has recooked "many a Jack of Dover." When a character calls out this character on his swearing, this character responds by saying, "I smell a Lollard in the wind." This character exclaims, "The monk put in the fellow's hood an ape!" after hearing about a monk who slept with his host's wife. This character sides with a man who interrupts Don Peter, asking that he start talking about hunting instead of discussing the (*) downfalls of great figures. This character claims that a story about how Sir Olifaunt stopped a search for an elf-queen is not worth a turd, which leads another character to describe a debate between Dame Prudence and her husband, Melibee. This character organizes a drawing of cuts after getting a group to agree to pay for a journey if they do not abide by his rules. For 10 points, name this owner of the Tabard Inn who organizes the storytelling contest in *The Canterbury Tales*.

ANSWER: Host [or Harry; or Harry Bailey]

18. This type of positivity is one of the Osterwalder and Schrader axioms that guarantee that the Euclidean correlation functions used in quantum field theory can be analytically continued to Minkowski space. For metals, a quantity that describes this phenomenon is related to conductivity by the Hagens-Rubens relation in the low frequency regime. Microfacets, which split a surface into many small grooves, are one way of taking into account roughness in this phenomenon, and along with the (*) cosine law, are used to derive the Oren-Nayer model. Waves that contain no power, called evanescent waves, appear when another type of this phenomenon occurs. The Fresnel equations describe transmittance and this phenomenon, one type of which occurs past the critical angle. For 10 points, name this wave phenomenon in which the wave returns to the medium of its origin.

ANSWER: reflection [accept reflectivity; accept reflectance; accept total internal reflection]

19. Egerius Baebus made Mount Tifata sacred to this deity, for whom Servius Tullius built a temple on the Aventine Hill. A child about to be sacrificed in Horace's Epode 5 invokes Nox and this deity, who transforms all of Meleager's sisters except for Gorge and Deianira into guinea hens in the *Metamorphoses*. In the *Aeneid*, this deity sends Opis down to slay Arruns. After the death of Numa Pompilius, this goddess turned the weeping (*) Egeria into a spring. She was part of a triad along with Egeria and the resurrected Virbius. Along with Juno Lucina, she provided aid for mothers in childbirth, votive offerings for which were found at her most famous ritual site, located near the Lake of Nemi. The daughter of Latona, she was the patron goddess of the King of the Wood. For 10 points, identify this Roman goddess of the moon, nature, and the hunt.

ANSWER: Diana [or Artemis]

20. Andrew Nicholson criticized Lord Byron for mistranslating *mentitur* in one of this man's poems, but praised him for rendering "Zoilus" as "Jack." This man addresses a wealthy patron whose guests applaud him for the quality of his food, rather than his companionship. He accuses Tongilianus of setting fire to his own house to collect the insurance and the doctor Symmachus of giving him a cold with his frigid hands. Tom (*) Brown famously evaded expulsion by extemporaneously translating one of this man's poems to begin, "I do not love thee, Dr. Fell." This author of a poem about the gladiators Priscus and Verus wrote several controversial poems in praise of Domitian. Born in Hispania, he is best-known for brief, satirical poems in elegiac couples. For 10 points, name this Roman poet of many epigrams.

ANSWER: Marcus Valerius Martialis [or Martial]

21. He wore a dark red cloak and held a brush, his hair curled upward on his bald head, in a late-life self portrait that was controversial for being done in enamel on Wedgewood pottery. He painted a portrait of four members of the 10th Dragoon for the Prince of Wales. His early work at York Hospital allowed him to compose plates for a book on midwifery, in which he detailed the fetus in utero at various stages, and his early realism is said to have come from studying a woman who died in childbirth. His experience with dead subjects allowed him to master another form whose skeletal structure he elaborately detailed, eventually inspiring the early studies of (*) Muybridge. Two dogs accompany John and Sophia Musters with animals that this man also showed being attacked by a lion in yet another work. For 10 points, name this British artist who painted *Gimcrack* along with a jockey and stable lad, a master equine painter whose massive bucking *Whistlejacket* canvas hangs in the National Gallery.

ANSWER: George Stubbs

22. A functor F from categories C to D has this property if it commutes with limits; similarly, functors of this type preserve all small limits. The morphisms of the category \mathbf{Top} are maps which all have this property. In descriptive set theory, this property is studied as the intersection between all the G_δ sets, which quantify oscillation as less than epsilon. According to one definition, this property is possessed by the Cantor function, and Peano curves have that property when the exponent is one-half. The Heine-Cantor theorem concerns this property between metric spaces M and N ; when M is compact, (*) every function possessing this property must possess the uniform type of it. One set of functions can comply with the Hölder definition of this property but not the Lipschitz definition. That set of nowhere differentiable functions, along with an epsilon-delta definition of this property, is named for Weierstrass. For 10 points, name this property of a function, defined by Cauchy in terms of two related infinitesimal changes, which is usually contingent on a function's graph having no "holes" or "jumps."

ANSWER: continuous [accept word forms]

1. March 3 is celebrated as Liberation Day in Bulgaria as a result of this agreement. For 10 points each:

[10] Name this 1878 treaty between Russia and the Ottoman Empire, which was so favorable to Russia that other European powers forced the Congress of Berlin to right the balance of power.

ANSWER: Treaty of **San Stefano**

[10] The last major battle of the Russo-Turkish Wars was the five-month siege of this city in Bulgaria, where Grand Duke Nicholas defeated Osman Pasha despite horrendous casualties.

ANSWER: **Pleven** [or **Plevna**]

[10] After losing 20,000 men trying to take Plevna, the Russians brought in this brilliant engineer, who organized a successful encirclement of the city. During the Crimean War, he organized the defense of Sevastopol.

ANSWER: Eduard Ivanovich **Totleben** [or Eduard **Totleben**]

2. For 10 points each, answer these questions about mountain-building in the northeast United States.

[10] This first of the three Appalachian orogenies had two impacts at the northeast and southwest ends of the Eastern Flysch Basin. The Clinch/Tuscarora formation, a bed of quartz compressed into sandstone, marks the end of this orogeny.

ANSWER: **Taconic** Orogeny

[10] The Taconic Orogeny is connected with the closing of this body of water, which separated Laurentia from Baltica and Avalonia.

ANSWER: **Iapetus** Ocean

[10] The existence of the Iapetus Ocean was posited by this American paleontologist, who observed different types of trilobites in English and Scottish rock formations. He also names a quarry in the Burgess Shale formation, which contains Cambrian fossils discovered by him.

ANSWER: Charles Doolittle **Walcott**

3. This form of literature was also known as “shilling shockers” or “bloods” and featured such titles as *Wagner the Wehr-Wolf*. For 10 points each:

[10] Name this genre of inexpensive serialized novels popular in Victorian England and aimed at the lower classes.

ANSWER: **penny dreadfuls**

[10] One pre-existing work recast as a penny dreadful was this novel in which Father Ambrosio murders his mother Elvira after being tricked by sorcery.

ANSWER: *The* **Monk**

[10] Matthew Lewis translated Cristoph Wieland’s epic poem named after this character into English. This character also titles a masque by Ben Jonson and an opera by von Weber.

ANSWER: **Oberon** [or **Oberon**, *the Faery Prince*; or **Oberon**, *or The Elf King’s Oath*]

4. Answer the following about everyone’s favorite Supreme Court case, *Mugler v. Kansas*, for 10 points each.

[10] The Court ruled that Kansas’ passage of a temperance law, and the subsequent devaluation of Mugler’s property, amounted to a police action rather than a use of this power. It is a state’s power to take private land for public use after giving appropriate compensation.

ANSWER: **eminent domain**

[10] In this later case, Oliver Wendell Holmes decided that if a state imposes such regulations on a property as to make it useless, that does amount to a use of eminent domain. This 1922 case arose when the plaintiff sued to prevent a company from mining anthracite under his land.

ANSWER: **Pennsylvania Coal Co.** v. *Mahon* [or *Pennsylvania Coal Co. v.* **Mahon**]

[10] *Mugler v. Kansas* was one of the cases handled by this late 19th-century Chief Justice, who wrote the majority opinions in *Munn v. Illinois* and *U.S. v. Cruikshank*.

ANSWER: Morrison “Mott” **Waite** [do not accept or prompt on “White” or “Byron White”]

5. In this practice, one holds set of prayer beads called *misbaha* while reciting the praises of Allah. For 10 points each:

[10] Name this Islamic form of prayer that begins with 33 repetitions of “Glory be to Allah.”

ANSWER: tasbih [prompt on, but do not reveal, dhikr]

[10] The last part of the *tasbih* prayer is the recitation of this phrase 34 times; it is called the *takbir* and means “Allah is great.”

ANSWER: Allahu Akbar

[10] *Tasbih* can be considered a form of this kind of Islamic prayer, in which a devotee silently repeats the names of God to himself.

ANSWER: dhikr [or zikr]

6. In addition to its nearly 200 Renoirs, this collection is home to Picasso’s “Head of a Woman.” For 10 points each:

[10] Name this Pennsylvania art collection that includes many of Modigliani’s “Jeanne” paintings.

ANSWER: Barnes Foundation

[10] The Barnes Foundation also contains many of this artist’s paintings illustrating Emile Zola’s *Nana*. This Precisionist may be better-known for *I Saw the Figure Five in Gold* and *My Egypt*.

ANSWER: Charles Demuth

[10] The Barnes also houses this Seurat canvas in which the title figures are arranged in a triangle with another Seurat work on a wall.

ANSWER: *The* Models [or *Les* Poseuses]

7. This term was first used in a paper by Paul Steinhardt and Dov Levine to describe certain objects in which atoms have an orderly pattern that is not periodic. For 10 points each:

[10] Name these objects that were discovered by Dan Shechtman in 1982 when he ran an electron diffraction experiment on a rapidly cooled mixture of manganese and aluminum. They caused him to remark “there can be no such creature” in Hebrew.

ANSWER: quasicrystals

[10] The icosahedral quasicrystals Shechtman discovered are characterized by this constant. Penrose’s tiling of the plane used shapes with side lengths ratio of this constant.

ANSWER: golden ratio [prompt on “phi”]

[10] Linus Pauling claimed that there were “no quasi-crystals, just quasi-scientists” and instead proposed to explain the findings with this idea that boundaries between intergrown crystals give periodic unexplainable five-fold symmetries because of how the lattice points are superimposed.

ANSWER: multiple twinning

8. This author won the second annual OCM Bocas Prize in 2012 for his book about Kangkara, Sonnyboy, and other inhabitants of Cascadu starting in the 1970s. For 10 points each:

[10] Name this author of *Is Just a Movie* who also wrote about Fisheye and Pariag living on Calvary Hill in another work.

ANSWER: Earl Lovelace

[10] This contemporary writer from the Caribbean wrote about Yuniur, who compares Rafael Trujillo to Sauron, in *The Brief Wondrous Life of Oscar Wao*.

ANSWER: Junot Diaz

[10] The longlist for the 2013 OCM Bocas Prize in fiction included this Diaz collection that starts out with “The Sun, the Moon, The Stars,” about Yuniur’s relationship struggles with Magdalena.

ANSWER: *This Is How You Lose Her*

9. Its creator applied it to the 1965 West German elections. For 10 points each:

[10] Name this concept expounded on by Elisabeth Noelle-Neumann in which perceived gaps in opinion accelerate or actualize the growth of those gaps.

ANSWER: the **spiral of silence**

[10] The “spiral of silence” is often compared with this phenomenon, in which a fear of reprisals stops people from exercising their free speech, thereby silencing unconventional opinions.

ANSWER: the **chilling effect**

[10] The spiral of silence is related to this phenomenon of personal alteration tested by Solomon Asch in a series of experiments involving lines of different lengths.

ANSWER: **conformity**

10. Answer the following questions about phase-transfer catalysis through chelation of cations. For 10 points each,

[10] Name these macrocyclic compounds which consist of a C-C-O repeating framework. They sequester cations through the coordination of oxygen atoms.

ANSWER: **crown ethers**

[10] Name these three-dimensional nitrogen-containing analogues of crown ethers, the most famous of which is generally noted with prefix 2.2.2 [read: 2-dot-2-dot-2].

ANSWER: **cryptands** [accept: **crypt**-compounds]

[10] Name these macrocyclic oligomers of aromatic components derived from phenol, resorcinol, and pyrogallol that are sodium ionophores where the sodium atoms coordinate to phenolate oxygens.

ANSWER: **calixarenes**

May need work. -Sriram

11. This ruler’s namesake stele, dating from 1292, was discovered by a Buddhist monk in the 19th-century.

[10] Identify this third and greatest ruler of the Sukhothai kingdom, a champion of Theravada Buddhism and a national hero of Thailand.

ANSWER: **Rama Kamheng** [or **Ramkhamhaeng**]

[10] The Buddhist monk who discovered Rama Kamheng’s stele later became this Thai king from the Chakri Dynasty. He offered a gift of elephants to James Buchanan, sadly not for the purpose of trampling Confederates, and hired Anna Leonowens as governess of his children.

ANSWER: **Rama IV** [or King **Mongkut**]

[10] Rama Kamheng’s most lasting legacy is this invention, which he created personally. It is analogous to a development overseen by Sejong the Great in Korea.

ANSWER: the Thai **alphabet** [or the Thai **writing system**; do not accept the “Thai Language”]

12. After being contractually obligated to play for the Virginia Squires, this athlete was largely responsible for the only two titles won by the New York Nets. For 10 points each:

[10] Name this ABA/NBA star who later won the 1983 NBA title with Philadelphia and who was known for acrobatic layups and dunks.

ANSWER: Julius Winfield **Erving** II [or **Doctor J**]

[10] Erving’s acting chops were showcased in this 1979 film, in which a struggling basketball team achieves success through the use of astrology. It’s as good as it sounds.

ANSWER: *The* **Fish that Saved Pittsburgh**

[10] One of Dr. J’s most famous moves was the “Rock the Baby” dunk carried out in 1983 over this stalwart defensive player for the Los Angeles Lakers.

ANSWER: Michael Jerome **Cooper**

13. This style was influenced by the earlier Arts and Crafts Movement, as seen in the work of its main exponent in the UK, Charles Rennie Mackintosh. For 10 points each:

[10] Name this late-19th, early-20th century art movement exemplified by the flowery advertisements of Alphonse Mucha and the stained glass of Louis Comfort Tiffany.

ANSWER: **Art Nouveau**

[10] This Belgian brought Art Nouveau to architecture with four townhouses he designed in Brussels, including the Tassel House.

ANSWER: Victor **Horta**

[10] Hector Guimard's contributions to Art Nouveau include the 141 iron and glass entrances he designed for this system, only 58 of which still remain.

ANSWER: the **Paris Metropolitan**

14. Contrary to what *actually* happened, this woman's appearance at Moscow's Choral Synagogue was seen as a sign of coming religious openness. For 10 points each:

[10] Name this Jewish woman who ran the Red Army's propaganda during the Russian Civil War.

ANSWER: Polina **Zhemchuzhina** [or Perl **Karpovskaya**]

[10] Polina Zhemchuzhina was the wife of this man, who was dismissed from the Politburo by Khrushchev nearly two decades after signing a Non-Aggression pact with the Nazis.

ANSWER: Vyacheslav **Molotov**

[10] Another propaganda device of the Soviet government was this newspaper, whose name meant, appropriately, "news." It complemented the official organ of the Communist Party, *Pravda*.

ANSWER: **Izvestia**

15. In this passage, a people without government sends for a foreign doctor while dying of a plague, but none of them pay him after being saved; when the plague comes back, the doctor refuses to return, and all but two families die. For 10 points each:

[10] Identify this passage about a people in Arabia who habitually massacre their governments when they perform badly, then unanimously decide to go without a government, with disastrous results.

ANSWER: the fable of the **Troglodytes** [prompt on, but do not reveal, answers like "The **eleventh Persian Letter** or the **twelfth Persian letter**"]

[10] The fable of the Troglodytes appears in this epistolary work by Montesquieu about Rica and Usbek's journey to France.

ANSWER: *The **Persian Letters***

[10] This French philosopher, who wrote a commentary on Book 29 of *The Spirit of the Laws*, divided human history into ten evolutionary stages in his *Sketch for a Historical Picture of the Progress of the Human Mind*.

ANSWER: Nicolas de **Condorcet** [or the Marquis de **Condorcet**]

16. Answer these questions about a Celtic fertility god, for 10 points each.

[10] This deity, who lives only between the winter and summer solstices, is often depicted carrying a bag of gold coins, although he is more often depicted with a stag's horns.

ANSWER: **Cernunnos**

[10] The only known artifact that depicts Cernunnos with his name is the Pillar of the Boatmen, which also includes depictions of these twin sons of Leda.

ANSWER: **Castor** and **Pollux** [or the **Dioscuri**]

[10] Cernunnos is often depicted with one of these animals with ram's horns. Other examples of these animals include Ophion, who ruled the world with Eurynome, and Gukumat, who created the world in the *Popol Vuh*.

ANSWER: **snake** [or **serpent**]

17. This poem tells of a mother who warns her daughter away from “fierce and wild” dogs, instead sending the girl to her death. For 10 points each:

[10] Name this Dudley Randall poem that ends with “O here’s the shoe my baby wore, but baby where are you?” written about a hate crime.

ANSWER: “The **Ballad of Birmingham**”

[10] Contemporary analysis of “Ballad of Birmingham” often contrasted Randall with Gwendolyn Brooks, specifically this Brooks poem in which the title group “lurk late,” “jazz June,” and “die soon.”

ANSWER: “**We Real Cool**”

[10] Randall’s publishing company, Broadside Press, published this author’s poetry book *From a Land Where Other People Live*. She described her struggle with illness in *The Cancer Journals* and wrote a “biomythography” titled *Zami: A New Spelling of My Name*.

ANSWER: Audre **Lorde**

18. This musician described a young poet who sings to a lady the lai “Qui n’aroit autre deport” in the opening section of his *Le Remede de Fortune*. For 10 points each:

[10] Name this trouvère who also composed music to accompany his poem *Le Voir Dit*, which recounted his love affair with the young Peronne.

ANSWER: Guillaume de **Machaut** [or Guillaume de **Machault**]

[10] Machaut was one of the most important composers of this period of French music starting in the fourteenth century. This period received its name from another composer active during it, Philippe de Vitry.

ANSWER: **Ars Nova** [or **New Art**]

[10] This most-famous work by Machaut was the first setting of the Ordinary mass written by a single composer.

ANSWER: *La Messe de* **Nostre Dame** [or **Notre Dame Mass**]

19. The fifth chapter of Milosz’s *The Captive Mind* deals with this man, whose first collection, *Under the Earth*, was published underground in occupied Warsaw. For 10 points each:

[10] Name this Polish author who reflected on his slave labor under the Nazi regime in the memoir *This Way for the Gas, Ladies and Gentlemen*.

ANSWER: Tadeusz **Borowski**

[10] Elie Wiesel reduced an 800-page tome called *And The World Remained Silent* into this stylistically-bare memoir about his time in Auschwitz.

ANSWER: **Night** [or *La Nuit*]

[10] Holocaust survivor Primo Levi wrote about an atom of carbon that passes through photosynthesis before arriving at the tip of his pencil in one of the stories in this chemistry-themed collection.

ANSWER: *The* **Periodic Table**

20. Hunsicker-Wang’s elucidation of the structure of this protein in *Thermus thermophilus* revealed a conserved 10 beta-strand fold, for 10 points each:

[10] Name this component of the cytochrome b6f complex, distinguished from other members of its class in that two histidine, rather than two cysteine, residues coordinate a central metal ion.

ANSWER: **Rieske** protein

[10] This component of photosystem I acts as the final electron acceptor in non-cyclic photophosphorylation, reducing NADP+ to NADPH, which is then fed into the Calvin Cycle.

ANSWER: **ferredoxin**

[10] The Rieske protein and ferredoxin are examples of this family of compounds which were proposed by Wachtershauser as integral to the origin of life. Sometimes also including the rubredoxins, members of this family, named for two elements, typically play a role in electron shuttling.

ANSWER: **iron-sulfur** proteins

21. It detected a cold spot contained within a warm stripe, which some suggested was evidence of a pre-Big Bang universe. For 10 points each:

[10] Name this European Space Agency experiment whose first full data release in March improved upon the measurements of the Wilkinson Microwave Anisotropy Probe.

ANSWER: **Planck**

[10] The first Planck data release also placed severe constraints on this property of the primordial density field. If this property is zero, the perturbations to the CMB temperature are entirely random.

ANSWER: **non-Gaussianity**

[10] Planck's precise measurement of .96 for the spectral index of the CMB also reinforced the possibility of this phenomenon occurring about 10^{-33} seconds after the Big Bang.

ANSWER: **inflation**

22. The opening chapter of this work includes a discussion of the treatment of Ellen Garwood and Fawn Hall during the Iran/Contra Affair, and also uses a picture of Margaret Thatcher at the 1987 Venice Summit as an example of something that breaks "through our numbness." For 10 points each:

[10] Name this seminal work of feminism in international relations that looks at such varied areas as tourism, jean production, and domestic servants.

ANSWER: **Bananas, Beaches, and Bases**: *Making Feminist Sense of International Politics*

[10] *Bananas, Beaches, and Bases* was written by this woman, who also wrote about taking women seriously in her work *The Curious Feminist*.

ANSWER: Cynthia **Enloe**

[10] One section of *Bananas, Beaches, and Bases* is titled as this woman "On My Mind: International Politics of the Banana." This Brazilian entertainer played "The Lady in the Tutti Frutti Hat" in *The Gang's All Here*.

ANSWER: Carmen **Miranda** [or Maria do Carmo **Miranda** da Cunha]

UNUSED Questions

This city's opera house allows visitors to walk up its sloped roof, from which a view is available of the Monica Bonvicini sculpture *She Lies* that sits in the nearby water. Tourists visiting this city can see Ellen Jacobsen's depiction of four "Factory Girls" after doing a river walk along the Akerselva. A number of painted wooden reliefs adorning this city's city hall depict scenes from Norse mythology and were created by Dagfin (*) Werenskiold. A set of 121 intertwining figures comprises the Monolith in this city, which also features the Wheel of Life and Angry Boy sculptures in Frogner Park by Gustav Vigeland. This city is home to such museums as the Kon-Tiki Museum and the Munch Museum. For 10 points, name this capital city of Norway.

ANSWER: Oslo

Features of this region include the Han River plain around its largest city, and its namesake strait lies off of the city of Pusan on its southeastern edge. For 10 points each:

[10] Name this peninsula.

ANSWER: Korean Peninsula [or Hangook bando; or Choson bando]

[10] Off the southwest coast of Korea lies this large island in the East China Sea; it was the site of a communist uprising in 1948.

ANSWER: Jeju Island [or Cheju; or Quelpart]

[10] Much of the agricultural shortcomings of Korea are due to this mountain range on its eastern side that, along with its extensive subchains, limits arable land.

ANSWER: Taebaek Mountains [or T'aebaek-sanmaek]

It was first observed in the decay of neutral kaons. For 10 points each:

[10] Name this symmetry-breaking interaction that also occurs slightly in some weak decays.

ANSWER: CP violation [or Charge Parity violation; do not accept "charge symmetry violation" or "parity symmetry violation"]

[10] CP violation in kaon decay was observed in 1964 by two Princeton physicists. Name either.

ANSWER: James Watson Cronin and Val Logsdon Fitch

[10] A weaker version of CP symmetry involves the use of this additional symmetry, the presence of which in such a context would also indicate a Lorentz violation.

ANSWER: time-reversal [prompt on time; prompt on CPT symmetry]

Five to seven nanometer Cadmium Telluride/Mercury Telluride/Cadmium Telluride quantum wells have been suggested as possible systems to observe one variety of this phenomenon, but were found to be topological insulators. Assa Auerbach, Ilya Finkler, and others investigated the steady states of a gas subject to this phenomenon while it is irradiated with microwaves. Setting permeability and the speed of light to one, a constant obtained from this phenomenon is equal to the inverse of the fine structure constant. Devices used in the experiment that initially measured it were supplied by Dorda and Pepper. Its discovery revolved around an experiment meant to investigate electronic transport in silicon field-effect transistors. Kane and Mele suggested the "spin" type of this effect. Defining the natural unit of resistance as h over e -squared, or about 25,000 Ohms, for 10 points, name this effect whose discovery earned a Nobel Prize for Klaus von Klitzing.

ANSWER: quantum Hall effect [accept spin quantum Hall effect before "steady states of a gas"; prompt on QHE; do not accept "Hall effect"]

One leader in this organization was known as the "shadow-Kaiser," It established a permanent Bureau in Brussels after its 1900 Congress, and Eduard Bernstein's doctrine known as Revision divided it. Karl Kautsky was the leading theorist of this organization, giving voice to its mission in his commentary on its Erfurt Program. August Bebel, the author of *Woman and Socialism*, was a prominent member, as was Scottish miners' advocate Keir Hardie, who founded the Labour Party. Split from its inception between the French Possibilists and the Marxist Absolutists, it sported a blood-red flag and the slogan "Workers of the World, Unite!" For 10 points, name this worldwide organization of socialist and labor parties that lasted from 1889 until the Great War.

ANSWER: Second International Workingmen's Association

This work is the subject of the semi-autobiographical Alison Lurie book *Familiar Spirits*. A section of this work on the meanings of “hell” in English and German concludes that they come to the same thing. One figure in this work demands “poems of science,” which leads the narrator to study physics and biology, and another figure is a batlike apocalypse survivor who transforms into a peacock. The first part of this work contains 26 sections corresponding to letters of the alphabet, and that part’s title figure is introduced as “A Greek Jew born 8 AD at Xanthos...when wolves and ravens were in Rome.” Plato and W.H. Auden return from the dead in this work, and its title refers to the poet’s house in Stonington, Connecticut. Beginning with the line, “Admittedly I err by undertaking this in its present form” in the section *The Book of Ephraim*, for 10 points, name this postmodern epic poem generated with a Ouija board, the magnum opus of James Merrill.

ANSWER: *The Changing Light at Sandover*

One poem in this collection describes the moon “shedding her plates of zinc in obtuse angles” while the author dreams of “divine Plato” and Phidias. Another poem from the “Caprices” section of this work describes ingénues who live hidden “in novels barely read,” and the caricature figure Monsieur Prudhomme inspired one poem in this collection. A poem from this work that begins “Your soul is the choicest of countries” inspired a namesake work by Debussy; that poem is “Claire de Lune.” Another poem that appears with “Soleils Couchants” in its “Paysages tristes,” or “Sad landscapes,” section speaks of “the long sobs of the violins [that] wound my heart with a monotonous languor.” For 10 points, name this Parnassian collection that includes “Chanson D’automne,” the first major collection of Paul Verlaine.

ANSWER: Poemes Saturniens [or Saturnian Poems; or Saturnine Poems]

The main character of this work is forced at first to rely on “the sainted More” and *The Rose of Raby* by Evelyn Payne-Ellis in an investigation after he his leg is broken by falling through a trap door chasing Benny Skoll. For 10 points each:

[10] Name this work in which the American researcher Brent Carradine helps the laid-up protagonist try to uncover who really murdered two children four hundred years earlier.

ANSWER: *The Daughter of Time*

[10] This Scotland Yard inspector comes to believe Henry VII murdered the Princes in the Tower by the end of *The Daughter of Time*. He also appears in *To Love and Be Wise*, *The Singing Sands*, and *The Franchise Affair*.

ANSWER: Alan Grant [or Alan Grant]

[10] Elizabeth Mackintosh wrote about Alan Grant in those works using this name, as opposed to her other pseudonym, Gordon Daviot.

ANSWER: Josephine Tev

The Bayeux Tapestry may depict this event in a scene of horses and knights falling. For 10 points each:

[10] Give the site of that eponymous battle, which either occurred during or immediately after the Battle of Hastings.

ANSWER: Malfosse [prompt on evil ditch]

[10] The only contemporary account of the fighting at the Malfosse was related in this man’s *Ecclesiastica Historia*. This man was also the biographer of Henry I.

ANSWER: Orderic Vitalis [or Ordericus, prompt on “Vitalis”]

[10] According to William of Poitiers, this companion of William the Conqueror ordered the retreat from the Malfosse. Another source suggests that he was removed from the battle by his attendants after being struck between the shoulder blades while suggesting a retreat.

ANSWER: Eustace II of Boulogne [or Eustace aux Gernons; prompt on Eustace]

Bridgeman and Rothery posited that the middle two constituents of this substance are actually triple bonded, with single bonds occurring between middle and outer atoms. This substance is similar in overall shape to hydrogen

peroxide, with the middle two atoms being separated by 121.7 picometers. In 1962, Temple University's A. G. Streng ran an exhaustive search of reactions involving this compound. Those reactions included a "vigorous" reaction with ammonia at 100 Kelvin and a "violent" reaction with chlorine monofluoride, which also released molecular oxygen, although later trials showed it was absorbed by pure solid CO₂. The same series of experiments recorded this compound's reaction with hydrogen sulfide to yield 433 kilocalories per mole, plus other products. A highly-viscous liquid phase of this compound was directly synthesized by cooling on the outside of stainless steel tubes by Los Alamos scientist Thomas Mills. That batch may have been used for preparing plutonium and neptunium hexafluoride. For 10 points, name this unstable compound, onomatopoeically nicknamed "FOOF," that is produced by heating fluorine and oxygen under high pressure.

ANSWER: **Dioxygen difluoride** [or **O₂F₂**; accept **FOOF** before read]

Sriram - *Will anyone get this before the last line? I will just write another question.*