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Reviving Drowned Flies and Burnt Plants in the Early Modern Household: Alchemical Recipes and Domestic Experiments in Peter Temple and Hester Pulter

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In the "Experiments" section of his seventeenth-century recipe book, Sir Peter Temple (1613-1660) includes a recipe entitled: "Dround Flyes Reuiued." [1] The short instructions detail how drowned flies, covered in salt and placed near heat, can be brought back to life. Temple, who cites "the new... Alchamy of Paracellus" as his source, adds his own commentary, noting that the recipe is "soone tryd but inconsiderable." [2] But why would Temple codify knowledge from an alchemical text into a recipe if he believed it to be "inconsiderable"? Why would he want to resuscitate flies in the first place? Around the same time that Temple wrote this peculiar recipe, Hester Pulter provided detailed instructions for an alchemical experiment to reconstitute plants from ashes in her emblematic poem "View But This Tulip," transcribed in a fair-copy manuscript. [3] Both Temple and Pulter wrote during a surge of alchemical vernacular print production in mid-seventeenth-century England, [4] and their manuscripts illustrate how alchemical knowledge was transmitted into domestic texts and spaces.

The boundaries of alchemical and domestic knowledge production were permeable in early modern England. In the past thirty years, historians of alchemy have shown that many early modern alchemists and chymists engaged in empirical inquiry; [5] simultaneously, scholars of

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recipe book studies have explored how recipe collection and experimentation facilitated what Elaine Leong has called early modern "household science."[\[6\]](#) In both fields, scholars have demonstrated the epistemic value that many early modern people placed on experience. Further, scholars have documented alchemical knowledge within English domestic manuscript recipe books,[\[7\]](#) alchemical experimentation within the early modern household,[\[8\]](#) parallels between alchemical and domestic productions,[\[9\]](#) and the wide influence of alchemy on seventeenth-century medicine.[\[10\]](#) However, despite repeated scholarship on their connections and confluences, seventeenth-century alchemical and domestic knowledge are often treated as separate rather than vibrant, overlapping experimental and textual traditions.[\[11\]](#)

By examining the manuscripts of Peter Temple and Hester Pulter, I explore how alchemical print sources were recontextualized and recodified into new media and genres with new uses and registers of meaning. Temple recodifies alchemical knowledge from John French's translation of pseudo-Paracelsus's *De Natura Rerum* into a recipe form, adding it to the "Experiments" section of his recipe book among playful recipes for "wagery" (or tricks). Pulter adapts prose accounts of an alchemical experiment, likely from Kenelm Digby's *A discourse concerning the vegetation of plants...*, into a poem that incorporates stylistic elements from emblems and recipes. Because of the poem's didactic nature, Pulter includes both practical and interpretive instructions for her reader to follow. By placing Temple and Pulter in conversation with one another, I demonstrate that not only was alchemical knowledge incorporated into early modern household science, but also that this incorporation was more than simply extraction of practical knowledge with a clear utilitarian function. Instead, Temple's and Pulter's writing demonstrates how early modern knowledge-making could engage in multivalent registers of meaning and invites us to think of the seventeenth-century recipe book and household as places for amusement, wonder, uncertainty, curiosity about alchemy and the wider natural world.

Peter Temple's "Drowned Flies" Recipe

In the mid-seventeenth century, Sir Peter Temple of Stantonbury prepared a folio fair-copy recipe book containing the inscription: "for my dear daughter Elinor Temple" (1653-c. 1729).[\[12\]](#) Like many other seventeenth-century recipe compilers, Temple gathered a variety of recipes for medicinal, culinary, and other household productions and copied them into his personal recipe collection to be tested and used in the early modern household. Near the end of the volume, in a section titled "Experiments," there are a pair of recipes in Temple's hand citing "the new... Alchamy of Paracelsus" – that is, John French's *A New Light of Alchymie*, which included the first full printed English translation of *De Natura Rerum*, an alchemical text attributed to Paracelsus. Temple created these recipes by repurposing two passages from French's translation of *De Natura Rerum*: "Iron-Barrs Cutt Asunder," which discusses smearing iron with mercury, and "Dround Flyes Reuiued," which purports to bring drowned flies back from the dead. In this, Temple was not a passive compiler, but instead recodified alchemical knowledge to follow recipe conventions of his fair-copy volume.

In the sixth book of *De Natura Rerum*, pseudo-Paracelsus presents the revived flies as one of many examples to show how animals, plants, and minerals could be revived through art:[\[13\]](#)

So also you see in all Animals which are not ingendered, but proceed from putrefaction, as Flies, which if they bee drowned in water, that no life at all is perceived in them, and if they were so left, they would continue dead, and never return to life of themselves any more. But if you cast salt upon them, and put them in the warme Sunne, or behind a warme furnace, they will recover their former life, and this truly is a raising of them up againe. For if this were not done, they would continue dead for ever.[\[14\]](#)

De Natura Rerum features numerous heterodox claims about the power and potential of human art, even in the realm of life and death. Most famously, in the first book, pseudo-Paracelsus includes a recipe for the homunculus, wherein a "little man" was generated in alchemical glassware.[\[15\]](#) This relatively brief discussion of resurrecting flies is presented as one of many resuscitations in the sixth book, alongside breeding hundreds of snakes from a single serpent "cut into pieces" and the resurrection of quicksilver.

Within Temple's manuscript, however, the reviving of drowned flies is adapted for a new context and new audience. Rather than presenting the flies as a definitive proof that affirms pseudo-Paracelsus's theories, Temple creates a recipe for an experiment that the readers could try for themselves. Temple's version of the passage reads:

Dround Flyes Reuiued.

1. In the same new Alcamy he sayes. [tha]t drownd flyes
couerd w[i]th salt. & layd in the sun or neere the
fyre reuiues. An Experiment soone tryd but
inconsiderable.[\[16\]](#)

Temple repurposes pieces of his source text into a recipe form that is similar to other recipes within his fair-copy recipe book. He adds a title ("Dround Flyes Reuiued" and citation to his source, greatly condenses the text to focus on the practical steps and materials, and makes interpretive changes. Alonso-Almeida identifies typical "stages" of early modern recipes, such as: a title, ingredients, preparations, evaluations or efficacy statements, and virtues.[\[17\]](#) Across early modern recipe books, recipes could take many forms, such that not all recipes include all stages and not all stages necessarily have a set order. However, by comparing this text to other recipes in the "Experiments" section, it is clear that Temple has codified alchemical knowledge from his source text into a recognizable domestic recipe form, including a title, a series of ingredients and preparations with enough detail that the reader could recreate the experiment, and an evaluation of the recipe's efficacy or potential efficacy. First, Temple creates a title by adding a noun phrase describing the produced effect, a common title template for recipes.[\[18\]](#) Like other recipe titles in his volume, Temple's title is separated in the center of the page with larger margins on either side. Adding a title both allows the reader to navigate the

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collection more easily and integrates the text into the uniform formatting of the volume as a whole. After citing the source text, Temple significantly edits the text to focus on the how-to knowledge, removing the parts of the passage that discuss how flies are engendered and the significance of the fly's resurrection. Further, while the source text advises placing flies by a furnace, Temple updates this to "near a fire." This small change is a theoretical engagement, recognizing heat as a generative force through which nature and alchemy both operated.

The most significant change that Temple makes is removing the elaborate efficacy statement from the printed source with a dismissive evaluation. Pseudo-Paracelsus proclaims: "...this truly is a raising of them up again. For if this were not done, they would continue dead for ever."^[19] In contrast, Temple succinctly writes: "An Experiment soone tryd but inconsiderable." Temple's note is likely intended for himself or family member; like many early modern recipes, it was not written with an unfamiliar reader in mind.^[20] By describing the recipe as "soone tryd," it is unclear if Temple's evaluation is a trial on paper, wherein Temple evaluated the recipe's worth based on his expectations, or if Temple had tested the experiment.^[21] Whether or not Temple had put the recipe into practice, Temple seems to think that the recipe is relatively easy to try, as it only requires an ambient heat source, salt, and flies, which were likely prevalent in the seventeenth-century household. Additionally, Temple calls the recipe "inconsiderable" – while his precise meaning is opaque, he differentiates his own evaluation from his source material's efficacy statement.^[22] Temple's use of the word "inconsiderable" could mean that the recipe's purported effect was unimaginable or it could mean that the recipe was insignificant or trifling.^[23] Further, Temple's inclusion of the "Drowned Flies Revived" recipe in his manuscript at all complicates either interpretation: why copy an "inconsiderable" recipe?

Temple's choice to record the "Drowned Flies Revived" recipe – despite his skepticism – demonstrates an openness and interest in putting new knowledge to the test within the household. Temple documented testing across his recipe books, showcasing the epistemic value he placed on firsthand experience. Elaine Leong demonstrates that Temple and other household members recorded recipes in three volumes (now BL Stowe MS 1077, 1078, and 1079) at different stages of the experimental process, typically placing tested and personalized recipes from other volumes into the fair-copy volume: "If a particular item passed the test it was transferred to the gift book [BL Stowe MS 1077]."^[24] In contrast, Temple's pseudo-Paracelsian recipes only appear in this gift book without any previous versions appearing in the other two volumes. At the same time, Temple's notes seem to indicate these recipes have not yet been tested. There is not a simple answer as to why Temple would include these untested recipes in the same manuscript as recipes that were thoroughly tested and personalized based on firsthand experience, but it is worth bearing in mind that recipe books were not linear in their construction or single-faceted in their use. Certainly, the epistemic value that Temple placed on testing is consistent, both in his use of different recipe books over the testing process and in his attentiveness in noting whether or not a recipe had been tested.

Temple was not alone in the value that he placed on testing; many seventeenth-century recipe compiler-practitioners engaged in testing and trials to evaluate the efficacy of the recipes that

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they collected and to customize recipes for personalized uses.^[25] In turn, they documented experiments in recipe books by writing notes in and around the text, adding efficacy statements like "probatum est,"^[26] crossing out passages, and modifying amounts, ingredients, and steps – sometimes in different hands.^[27] Each time a recipe was copied in a new manuscript instantiation, it became a new opportunity for recipe compiler-practitioners to assess, test, and modify the recipe through their own first-hand experiments. Recipes were consistently being created and recreated through transcription and testing.

Testing "Drowned Flies Revived" could offer Temple insight into the credibility of its source, which could prove useful even if the recipe failed. As Temple observes, the recipe could be "soone tryd" with simple steps and ingredients. The results could be used to assess the value of other knowledge, practical or theoretical, contained within *De Natura Rerum*, which in turn, might help to determine if more elaborate processes within the volume should be tested. Early modern recipe compilers did not – and, in some cases, simply could not – test every recipe they collected.^[28] "Drowned Flies Revived" offered a simple and inexpensive way to appraise the alchemical claims within *De Natura Rerum*.

Temple's evaluative statement on the "Drowned Flies Revived" recipe demonstrates how firsthand experience could supersede other kinds of authority. His comment that the recipe is inconsiderable shows a critical engagement with the source material. Temple did not simply copy pieces of alchemical knowledge, but evaluated that knowledge, modified it, and indicated that it could be tested within his domestic epistemic methods. Further, Temple's evaluative statement asserts the primacy of experimentation as a way to evaluate knowledge, even in the face of his own skepticism. His openness and curiosity, if not optimism, encouraged him to record and potentially test alchemical knowledge: if nothing else, the recipe is "soone tryd." In this, Temple appears to be among the early modern recipe-compilers who Leong describes as "approach[ing] recipe collecting as 'bring it home first, decide what to do with it second.'"^[29] Whether or not the recipe could be replicated through a domestic experiment would ultimately decide its merit, rather than the source's textual authority or Temple's preliminary dismissive assessment.

Recreational "Experiments"

Temple not only rewrites the pseudo-Paracelsian prose into domestic recipes, but places this alchemical knowledge into a new context: the "Experiments" section of his recipe book, which is filled with curious and entertaining recipes, including practical jokes. Within this new context, Temple's recipe to revive drowned flies could be recreationally employed as a trick to delight or astonish onlookers. In this case, the recipe would have a clear use within the seventeenth-century household, even if Temple believed that truly bringing flies back from the dead was *inconsiderable*. However, though these recipes sought to entertain, they were not frivolous. Early modern recreation and experimentation could overlap, such that a trick could simultaneously amuse, improve health, and provoke natural philosophical inquiry.

Mauer, Margaret. "Reviving Drowned Flies and Burnt Plants in the Early Modern Household: Alchemical Recipes and Domestic Experiments in Peter Temple and Hester Pulter." *EMSJ*, 9, 2024, 52-71.

The section includes ten eclectic recipes over three folios, each with the header "Experiments" at the top. The section begins with the two recipes adapted from John French's pseudo-Paracelsus translation. The first recipe, "Iron Bars Asunder" is written on a page by itself with ample additional space (138r). The second folio page (139r) includes numbered recipes for "Drowned Flies Revived" (1), a recipe for "water kept sweet" (2), relating to perfume, and two culinary recipes (3, 4). On the third and final folio (140r), the numbering restarts with a group of five recipes for "wagery" (Temple's spelling of "waggery"). Wagery refers to "the action or disposition of a wag; drollery, jocularity... mischievous drollery, practical joking." [30]

The organization of Temple's recipe book separates these "Experiments" from other sections. Temple's recipe book contains 140 folios, along with five loose folios at the end. The volume primarily focuses on medicine (f. 1-108), followed by shorter sections with headers: Cookery (f. 109-14), Made wines (f. 115), Perfumes (f. 116-18), Husbandry (f. 119-21), Horses (f. 122-34), Dogs (f. 135), Fishing (f. 136), Rabbits (f. 137), and Experiments (f. 138-40). Initially, Temple organizes recipes by production, then by the kind of domesticated animal aided, and finally, by particular activities, like fishing and catching rabbits. "Experiments" encompasses assorted recipes, but it is not a catch-all category for recipes that do not fit elsewhere; in fact, some could arguably be placed in other sections. For example, a pair of "Experiments" could also be "Cookery": "eggs not boyld too hard" and "you may rost a capon and boyle another on the same spitt then." The recipes in the "Experiments" section have a certain novelty – like boiling eggs with rosemary to ensure they will not become too hard or preparing two capons different ways on the same spit – that make them stand out as amusements or curiosities.

On the final folio of "Experiments," Temple groups recipes for "wagery," or pranks, together in three ways: they appear on a single folio, they are numbered one through five, and some of their titles reference each other: the first recipe on the page is for a "Knaueish purge...", while the second is called "more wagery," and the third is titled "Another." [31] The title "more wagery" implicates both the previous and subsequent recipes as pranks. The final two recipes, "Sleepe caus'd," and "To Fox one" both appear to cause sleep with the implicit intention of being administered to unknowing participants.

Reading the recipe for "more wagery" alongside references to cow-itch in seventeenth-century printed texts establishes its use in pranks. Temple's recipe for "more wagery" reads: "Cowitch apply'd to any part of yo[ur] body will cause it to itch extreamply for a while." Cow-itch refers to the plant called *Mucuna pruriens* or Velvet Bean today and can be used to refer specifically to the "stinging hairs of the [plant's] pod." [32] Cow-itch's ability to cause itchiness and irritation was well-documented across genres, from Robert Hooke's *Micrographia* (1665) to the plays of John Lacy and William Congreve. [33] In *The treasury of drugs unlock'd...*, Jo. Jacob Berlu writes that the peasecod of cow-itch "because of its provoking itching and scratching, is of no other use, but to play Tricks and Waggery with..." [35] Fictional depictions show cow-itch being applied to an unknowing person's sheets, clothes, or skin as a prank or revenge. Richard Amyas's *Antidote Against Melancholy* (1659) – a miscellaneous recipe collection with instructions for medicines, inks, fishing, and pranks – includes a recipe for a trick that promises that "he shall not sleep, but tumble & toss all night..." if the reader takes "a little Cowitch, and

rub the Coller of the shirt." [36] Though Temple's "wagery" recipe does not have a clear printed source, he could learn of its use in tricks from a variety of texts. [37]

The inclusion of "wagery" within Temple's "Experiments" highlights the novelty, and even recreational, aspects of these recipes, which could explain Temple's inclusion of the "Drowned Flies Revived" recipe. However, while "wagery" makes up fifty percent of the "Experiments" section, Temple does not include "Drowned Flies Revived" on the same folio or numbered list as his pranks, nor does he indicate that the recipe is a trick. Still, by placing "Drowned Flies Revived" under the same section heading as recipes for "wagery," Temple changes the register of the experiment; its inclusion in "Experiments" highlights a certain playfulness and curiosity, rather than pseudo-Paracelsus's demonstrative proof of artificial resurrection.

If this is the case, the recipe's new context could explain why Temple would choose to write "Drowned Flies Revived": it *did* have a use within the seventeenth-century household as a recreation. Temple's note that the recipe is *inconsiderable* could indicate that the revival should be understood as a trifle and a trick, rather than a true resurrection as pseudo-Paracelsus reports. Like the other "Experiments," the "Drowned Flies Revived" recipe was a novelty that could be used to surprise and amuse. Many books of secrets and recipe books included tricks and jokes, which provided entertainment to readers in their recounting and practitioners in their recreation. [38] These recipes for recreation boasted not only merriment, but health benefits to the onlookers. Amyas's *Antidote Against Melancholy* (1659) advertises its recipes as recreation: "I use some civil recreation to recreate my self, my friends, and sometimes when my Patients are melancholy through pain, to make them merry... I have here discovered many Secrets for your recreation at your leisure." [39] "Drowned Flies Revived" could repurpose its source material as a recreation meant to surprise, delight, and revitalize its onlookers.

This kind of recreation was not at odds with natural philosophical inquiry. The language of play, jokes, and tricks pervaded natural philosophical discourse. Nature herself was playful, and man could respond in kind. [40] Ani Govjian argues that tricks could themselves be an experimental mode that could "navigate and manage... epistemic distress without having to come to certainty," while revealing moral or epistemic virtues. [41] As a mere trick, the "Drowned Flies Revived" could be a marvel that produced wonder and curiosity while putting at a distance the broader natural philosophical, religious, and moral complications of such an artificial resurrection. Recreation and natural philosophy were not oppositional so much as different interpretive registers of the same experiment.

Reviving Drowned Flies Across Time

If Temple had tried this recipe, he may have been surprised that this inconsiderable experiment could revive drowned flies after all. In fact, there is a long and persistent history of accounts and recipes for reviving flies, including the writings of Pliny and the letters of Benjamin Franklin. [42] Pliny, pseudo-Paracelsus, and Benjamin Franklin describe variations of the same resuscitation but draw wildly different conclusions about the implications of what they have witnessed. [43] Variations of this recipe have also been recorded on the internet in the twenty-

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first century. The documented repetition of this experiment, from Pliny to YouTube, speaks to its success – though the flies are incapacitated from drowning, rather than dead.[\[44\]](#) As it turns out, placing a drowned fly in salt is the entomological equivalent of placing a waterlogged phone in rice.[\[45\]](#)

Twenty-first-century domestic experimenters highlight how amusement, curiosity, inquiry, and knowledge-making can co-exist within a single experiment. They post online to show their findings, boast about tricking unsuspecting onlookers, and inquire about the scientific theory that underpins their firsthand experience.[\[46\]](#) These domestic experimenters offer one answer to Simon Werrett's question at the conclusion of *Thrifty Science*: "If we were to create a twenty-first-century version of Thomas Wijck's painting of the alchemist's kitchen, what would it look like?"[\[47\]](#) Several websites include recipes with how-to instructions for readers, including tongue-in-cheek titles: "Bringing a Fly Back From the 'DEAD' (Or, 'How to Win a Bar Bet and Make People MAD!)"[\[48\]](#) and "RESUSCITATE A HOUSEFLY? LEARN FLY CPR!"[\[49\]](#) In addition to sharing firsthand written accounts, some domestic experimenters have recorded their results on YouTube, filled with irreverent humor, pop music soundtracks, and instant replays: reviving flies "from the dead" becomes an online spectacle viewed by thousands.[\[50\]](#)

Though twenty-first-century experimenters offer some parallels with Temple's recipe for reviving drowned flies, their differing historical contexts must be taken into consideration. One Reddit user, discussing their experiment in a forum, writes: "Science knows about this right?"[\[51\]](#) This "capital-S" invocation imagines Science as a monolithic authoritative entity, associated with prestigious, accredited research institutions. Its experiments are contained within dedicated, private laboratories and its results are contained within pay-walled, peer-reviewed journals. Science is separate from and largely inaccessible to these amateur experimenters who revive flies in domestic, public, and online spaces. Of course, as Werrett charts in *Thrifty Science*, these demarcations between domestic experiments and "Big Science" are centuries in the making – however, in early modern England, the household was a vibrant and central location for experimentation and knowledge-making.[\[52\]](#) Coincidentally, Temple died in 1660, the same year that the Royal Society received its charter from King Charles II, creating an exclusive institution for gentleman-philosophers emblematic of the gradual shift away from experimentation within the household.[\[53\]](#) However, if YouTube is any indication, domestic experimentation – with its curiosity, levity, and sense of wonder – persists.

Hester Pulter and Palingenesis

In her emblematic poem "View But This Tulip," Hester Pulter captures how alchemical and religious mysteries were inextricable from the ordinary, domestic, and routine activities of household kitchens and still-rooms. Pulter's poetry, which survives in a single extant manuscript, reimagines natural philosophical print treatises on palingenesis into the form of an emblematic poem. Palingenesis was an experimental, alchemical practice that sought to regenerate organisms from ashes or decaying matter, foretelling God's reconstitution of human bodies at the end of the world.[\[54\]](#) Because prominent alchemists pseudo-Paracelsus and Joseph

Mauer, Margaret. "Reviving Drowned Flies and Burnt Plants in the Early Modern Household: Alchemical Recipes and Domestic Experiments in Peter Temple and Hester Pulter." *EMSJ*, 9, 2024, 52-71.

du Chesne documented their early palingenic experiments, palingenesis fell under the wide umbrella of alchemical activities.^[55] Further, English natural philosophers Thomas Browne and Kenelm Digby wrote in print about the significance of palingenic experiments. Pulter's poem "View But This Tulip" combines the genres of emblem and recipe to place palingenic experimentation along with its natural philosophical and religious implications within the context of the seventeenth-century household.

Pulter's bound manuscript of 167 leaves contains 117 poems, divided into two sections of "Poems" and "Emblemes," and an unfinished romance; the poem "View But This Tulip" appears in the "Emblemes" section, which contains 52 emblematic poems.^[56] Pulter's manuscript is not a recipe book and her poem is not a recipe. However, the manuscript's domestic construction and audience is similar to those of early modern recipe books and the poem's conventions are modelled on those of a recipe. Like Temple's recipe for reviving flies, Pulter's instructions for reconstituting plants situates alchemical experimentation, speculation, and knowledge-making within the early modern household. Further, because Pulter writes a poem, rather than a traditional recipe, her instructions continue past the point where conventional recipes end, providing a didactic account for the reader on how to interpret the religious significance of the palingenic experiment in front of them.

Though resuscitating drowned flies is not palingenic reconstitution, Temple's source, the sixth book of *De Natura Rerum*, contains an influential account of palingenesis that details a plant reconstituted from calcined ashes. French Paracelsian alchemist and physician Joseph du Chesne also famously recounts an unnamed Polish physician reviving a plant from ashes, which appears in Thomas Tymme's English translation *The practise of chymicall, and hermeticall physicke* (1605). Subsequently, several English natural philosophers, most notably Thomas Browne in *Religio Medici* (1642) and Kenelm Digby in *A discourse concerning the vegetation of plants...* (1661), turned to palingenesis to theorize the resurrection of the human body in the eschatological afterlife. Digby, too, writes of his own palingenic experiments attempting to revive plants and crayfish, and George Hartman, Digby's steward and technician, later published Digby's recipe for calcining and reviving crayfish in *A choice collection of rare secrets and experiments in philosophy* (1682).^[57]

Hester Pulter (1605-1678^[58]) describes palingenesis in her emblematic poem "View But This Tulip (Emblem 40),"^[59] using distinctly alchemical language that demonstrates a complex understanding of alchemical theory and practice:^[60]

View but this Tulip, Rose, or Iuly fflower
And by A ffinit see an Infinite power
These fflowers into their Chaos were retir'd
Till humane Art them raisd and Reinspir'd
Which [with] beating, Macerating, ffermentation
Calcining, Chimically, with segregation
Then least the Ayr these secrets should reveal
Shut up the Ashes under Hermes Seal

Mauer, Margaret. "Reviving Drowned Flies and Burnt Plants in the Early Modern Household: Alchemical Recipes and Domestic Experiments in Peter Temple and Hester Pulter." *EMSJ*, 9, 2024, 52-71.

Then with A Candle or A gentle ffire
You may reanimate at your desire...[61]

Pulter names the alchemical degrees of fermentation, calcination, and separation as steps that the reader must "chimically" enact to revive the flower, before shutting it in a vessel with "Hermes Seal." Named for the alchemist Hermes Trismegistus, Hermes' seal was a method for joining glass together to create an air-tight closure, which Gesner describes as: "Of *Hermes* seal, that is, of ioyning together the mouthes of glasen vessels with a paire of hot burning tonges softlye thrusting them together..." [62] Pulter also references Paracelsus's theory of the *tria prima*, signaling a Paracelsian worldview wherein everything is made of three principles: "To their first principles they'l quickly pass/ ffrom Sulphur, Salt, and Mercury they came/ When they dissolv they turn into the same..." (12-14). Pulter's specificity is not limited to practical techniques; rather, her poem imagines an alchemical cosmology wherein the world is made from the constituent parts of the *tria prima*: salt, mercury, and sulfur. Palingenesis was closely tied to prominent Paracelsian writers, including Paracelsus and Joseph du Chesne, and by invoking the *tria prima*, Pulter links her emblematic experiment to its alchemical lineage.

The emblematic poem begins by instructing the reader to "view," but without an accompanying image, the reader must create an image of their own. While a typical emblem structure includes a motto or title (*inscriptio*), a picture (*pictura*), and an epigram or commentary (*subscriptio*) that work in tandem to create meaning, Pulter's poem is a naked emblem, which provides only the text.[63] Instead, the poem's imperative first line requires the reader to find or create an image, either from memory or from the world around them: "View but this tulip, rose, or gilly flower..." As both Alice Eardley and Frances Dolan have noted, Pulter's flowers closely resemble Digby's list of flowers used in palingenesis (rose, tulip, and clove-gillyflower), suggesting that Pulter may have read Digby.[64] Du Chesne, too, mentions both the rose and gillyflower among the flowers that the Polish physician had calcined for palingenesis, indicating that these were common flowers used in palingenic experiments:

...if a man desired to see a Rose or Mary-gold, or any other flower... then would hee take the glasse wherein the ashes of such a flower was inclosed, whether it were of a Rose, a Marie-golde, a Poppey, a Gilly-flower... And putting the flame of a Candell to the bottome of the glasse, by which it was made hote, you might see that most thinne and impalpable ashes, or salt, send foorth from the bottome of the glasse, the manifest forme of a Rose, vegetating and growing by little and little, and putting on so fully the forme of stalckes, leaues and flowers..." [65]

Pulter's poem mirrors du Chesne's prose account of palingenesis, with both writers providing detailed imagery from which the reader could derive a mental picture of the reconstitution of a plant from ashes. Further, Pulter's reader could create the image of the emblem using the flowers that were available in seventeenth-century England. Pulter's selection of flowers could be found in the recipe books and gardens of large, affluent households.[66] Pulter's poem, then, could work in conjunction with the real flowers in and around some households, including her own. Dolan observes that Pulter's reader could find an accompanying image by reading the

Mauer, Margaret. "Reviving Drowned Flies and Burnt Plants in the Early Modern Household: Alchemical Recipes and Domestic Experiments in Peter Temple and Hester Pulter." *EMSJ*, 9, 2024, 52-71.

manuscript poem alongside the printed woodcuts of "Gerard's *Herbal*, another massive volume Pulter seems to have consulted." [67] The emblematic nature of the poem positions the reader as a collaborator who must construct an image in order to engage in an alchemical experiment. Through the listing of multiple flowers, Pulter signals that her reader can choose any flowers available to them as an emblem, whether it was conjured in their imaginations, in the books that they read in tandem, or in their gardens, kitchens, and stillrooms.

In contrast to print accounts of palingenesis that Pulter may have read – including du Chesne, Browne, and Digby – Pulter's manuscript places the experiment and its natural philosophical and religious resonances within the domestic context of a personal manuscript with an intimate, familial audience. Compiled by a scribe but containing corrections in Pulter's hand, this fair-copy manuscript (ca. 1660s) likely did not circulate outside of Pulter's immediate family during her lifetime. [68] Pulter's poetry engages with political, religious, natural philosophical, and literary sources, as well as deeply personal subjects, including pregnancy and child loss. [69] Eardley has argued that the manuscript's domestic nature allowed Pulter to write about sensitive topics, both personal and political. [70] The domestic construction and audience of the manuscript is akin to a domestic recipe book; like Temple, Pulter introduces alchemical knowledge from print sources into a manuscript that could be reinvented, tested, and revised as part of the iterative knowledge-making of early modern household science.

Parallels between Pulter's manuscript and early modern recipe books are further reflected in the poetic structure of "View But This Tulip," as Pulter, like Temple, codifies this alchemical experiment into the language of a recipe. Her poem uses imperative and subjunctive directions, with enough detail about ingredients, tools, and methods that the reader could actually use the poem to recreate the experiment. Pulter carefully instructs the reader to complete each ordered step: beat, macerate, ferment, calcine, and segregate. She gives attention to the type of seal for the glass vessel and the gentle level of the heat, even suggesting the use of a candle. Additionally, the poem punctuates the sequential order through the repetition of the word "then" at the beginning of eight lines, demarcating the sequential progress from one step to the next. As Samantha Snively has astutely observed, Pulter's poem differs from other accounts of palingenesis by placing the alchemical experiment within "a particularly domestic epistemology... incorporat[ing] contemporary scientific thought into her domestic practice and vice versa..." [71] Through these parallels, the poem blurs the boundaries between the alchemical experiment and the typical domestic recipes and labor of distilling and making medicines. Both the manuscript's material construction and the poem's stylistic construction locate Pulter's alchemical experiment within her household.

By combining the recipe and emblem genres, Pulter's poem transitions from the description of how to complete the experiment to how to interpret the results:

Then though I into Atomes scatted bee
In Indivisables I'll trust in thee.
Then let this Comfort mee in my sad story
Dust is but ffour degrees remov'd from Glory

Mauer, Margaret. "Reviving Drowned Flies and Burnt Plants in the Early Modern Household: Alchemical Recipes and Domestic Experiments in Peter Temple and Hester Pulter." *EMSJ*, 9, 2024, 52-71.

[...]
Then Halelujajs will I Sing to thee
My Gracious God to all Eternitie
Then at they dissolution patient bee
If Man can raise a fflower God can thee (21-24; 42-45)[72]

Recipes and emblems are both didactic genres; a recipe provides how-to instructions while the emblem's interplay of word and image is meant to delight and impart a lesson. Through the dual purpose of amusement and moral instruction, emblems were recreations that entertained and renewed readers. Pulter applies the genre conventions of a recipe to her emblem; her directions do not end with the experiment's practical steps. Instead, Pulter transitions from instructing the reader in practical steps to interpretive steps – "Then let this Comfort mee" (23), "Then my impatient soul Contented bee" (27), "Then at they dissolution patient bee" (44) – that intermingle first-person (my) and second-person pronouns (thy). These instructions allow the reader to recreate the experiment and read its emblematic significance as Pulter intends. This combined emblem-recipe allows Pulter to imagine the theoretical and religious interpretations of the experiment as an extension of its practical steps – something that remains implicit in many traditional recipes, including Temple's recipe for reviving flies. Through combining the recipe and emblem form in her poem, Pulter makes explicit the inseparability of the material and immaterial and the limitations of demarcating theory and practice.[73]

Many early modern writers, including Pulter, argued that palingenesis prefigured God's ability to resurrect human bodies at the end of the world. Comparing herself to the ashes of plants, Pulter describes her own body as becoming "Atomes scatterd" and "Indivisibles" after her death. Palingenesis was commonly connected to Pythagorean metempsychosis or Lucretian atomism, but in spite of – or perhaps *because* of – these non-Christian connections, writers linked palingenesis with Christian resurrection.[74] The ending of Pulter's poem resonates with Browne's reflection on palingenesis:

This I make good by experience, and can from the ashes of a plant revive the plant, and from its cinders recal it to its stalk and leaves again. What the Art of man can doe in these inferiour pieces, what blasphemy is it to imagine the finger of God cannot doe in those more perfect and sensible structures? This is that mysticall Philosophy, from whence no true Scholler becomes an Atheist... but in an ocular and visible object the types of his resurrection.[75]

Palingenesis, then, reaffirmed God's omnipotent power in a distinctly Christian universe; the experiment made "good by experience" and provided "an ocular and visible object" that proved material reconstitution was possible. As the 1646 *Westminster Confession of Faith* asserts, on the Last Day, "all the Dead shall be raised up, with the self same bodies, and none other, although with different qualities..." [76] Experimenters used palingenesis to probe the possibilities of the religious conundrum that a "self same" body whose parts had disintegrated could be remade with "different qualities." These experiments sought to assuage doubt by

Mauer, Margaret. "Reviving Drowned Flies and Burnt Plants in the Early Modern Household: Alchemical Recipes and Domestic Experiments in Peter Temple and Hester Pulter." *EMSJ*, 9, 2024, 52-71.

offering material evidence to support a central religious ontological and eschatological mystery. Or, as Pulter succinctly muses: "If Man can raise a fflower God can thee" (45).

Several scholars have rightly observed that the "if" in the final line of "View But This Tulip" introduces room for skepticism by seemingly making God's ability to revive a person's body conditional on man's palingenic experiment.^[77] However, lingering doubt should not be conflated with a subversive despair that dismisses palingenesis in order to reject the promise of resurrection – a central tenet of the Church of England's doctrine. Dyani Johns Taff writes, "[Pulter] is surely aware of the dubiousness of alchemical promises and the impossibility of repeating the alleged miraculous flower revivals,"^[78] while Samantha Snively notes, "...the nonexistent success rates of early modern palingenic experiments (no matter what Kenelm Digby thought) suggest a fatalist reading of the poem, one in which Pulter's hope in a God that can 'reinspire / Our dormant dust' is without foundation."^[79] While Pulter's final line places weight on the success of the experiment, its failure is not a foregone conclusion. Rather, "what Kenelm Digby thought" along with other early modern experimenters is at the heart of understanding the popularity of palingenesis at the time. Scholars today might understand palingenesis as an impossibility, but early modern writers, including Digby, reported palingenic successes along with failures.^[80] It is unclear what these successes actually looked like or how they might be understood in terms of twenty-first century science, but regardless, it is necessary to take these accounts seriously. This is not to say that these reports were not without their own bias; a failure could be attributed to an error by the individual practitioner, while a success demonstrated the reverberations of an inherently Christian universe. Given Pulter's knowledgeable description of palingenesis, including its place within Paracelsian theories of matter, she was at least familiar with positive reports of palingenesis. Building from these accounts, Pulter's poem is an emblematic meditation on the relationship between experience and faith. The final line of her poem is unresolved, existing in the moment that the experimenter heats the ashes, with the reader left to contemplate their own hopes and doubts along with the conjured imagery of the emblem.

Conclusion

Though Temple's and Pulter's alchemical writings both hold room for skepticism and doubt, the act of writing a recipe down is inherently an investment in possibility – if not in hope. Domestic texts and spaces were familiar places of experimentation where knowledge was constantly being codified, tested, and modified. Alchemy, with all of its multivalence and messiness, was folded into ever-evolving knowledge of domestic texts, spaces, and practices that made up seventeenth-century household science. Further, by codifying alchemical knowledge into didactic genres, Temple and Pulter invite the reader to actively engage in these alchemical experimentations. Notably, both Temple and Pulter incorporate elements of playful recreation into their experiments that is not present in their source texts. Temple changes the register of his recipe by placing it alongside practical jokes and curiosities, while Pulter's poem combines the conventions of a recipe and an emblem, a genre that sought to instruct through delight. Though these playful reimaginings might mitigate some of the broader theoretical and religious implications of Temple's and Pulter's experiments, they cannot fully dismiss the

Mauer, Margaret. "Reviving Drowned Flies and Burnt Plants in the Early Modern Household: Alchemical Recipes and Domestic Experiments in Peter Temple and Hester Pulter." *EMSJ*, 9, 2024, 52-71.

unease of recreating life from ashes or lifeless bodies. Ultimately, the recipe is open-ended, rather than producing a particular substance or effect. Instead, it falls to the reader-practitioner to interpret the results in front of them; a single domestic experiment could produce amusement or philosophy, religious conviction or doubt, curiosity or knowledge, or anything in-between. Something as *inconsiderable* as a flower or fly might ripple into a new way of understanding the world.

NOTES

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[1] British Library Stowe MS 1077.

[2] British Library Stowe MS 1077, 138r and 139r.

[3] The precise year that Temple codified the "Drowned Flies Revived" recipe is unknown, but it must have been between the year his source was printed (1650) and death (1660). Pulter likely composed "View But This Tulip" around this time, between 1653 and 1661; see Alice Eardley, "Hester Pulter's 'Indivisibles' and the Challenges of Annotating Early Modern Women's Poetry," *Studies in English Literature, 1500-1900* 52, no. 1 (2012), 122.

[4] Lauren Kassell, "Secrets Revealed: Alchemical Books in Early-Modern England," *History of Science* 49, no. 1 (March 1, 2011): 61-A38.

[5] See William Eamon, *Science and the Secrets of Nature: Books of Secrets in Medieval and Early Modern Culture* (Princeton: Princeton University Press, 1994); William R. Newman and Lawrence M. Principe, *Alchemy Tried in the Fire: Starkey, Boyle, and the Fate of Helmontian Chymistry* (Chicago: University of Chicago Press, 2005); Bruce T. Moran, *Distilling Knowledge: Alchemy, Chemistry, and the Scientific Revolution* (Cambridge: Harvard University Press, 2006); Lawrence M. Principe, *The Secrets of Alchemy* (Chicago: University of Chicago Press, 2015); Jennifer M. Rampling, *The Experimental Fire: Inventing English Alchemy, 1300-1700* (Chicago: University of Chicago Press, 2020).

[6] On household science, see Elaine Leong, *Recipes and Everyday Knowledge: Medicine, Science and the Household in Early Modern England* (Chicago: University of Chicago Press, 2018). Additionally, see Elaine Leong and Alisha Rankin, "Testing Drugs and Trying Cures: Experiment and Medicine in Medieval and Early Modern Europe," *Bulletin of the History of Medicine* 91, no. 2 (2017): 157–82; Wendy Wall, *Recipes for Thought: Knowledge and Taste in the Early Modern English Kitchen* (Philadelphia: University of Pennsylvania Press, 2015), esp. chapter 5. *The Recipes Project* contains numerous case studies of how recipes are used and reused. <http://recipes.hypotheses.org/>.

[7] Jayne Archer, "Women and Chymistry in Early Modern England: The Manuscript Receipt Book (c. 1616) of Sarah Wiggess," in *Gender and Scientific Discourse in Early Modern Culture*, ed. Kathleen P. Long (Burlington, VT: Ashgate, 2016); Jayne Archer, "Women and Alchemy in Early Modern England" Ph.D., University of Cambridge, 1999; Penny Bayer, "Lady Margaret Clifford's Alchemical Receipt Book and the John Dee Circle," *AMBIX* 52, no. 3 (November 2005): 271–84; Penny Bayer, "Women's Alchemical Literature 1560-1616 in Italy, France, the Swiss Cantons and England, and Its Diffusion to 1660," Ph.D., University of Warwick, 2003; Michelle DiMeo, *Lady Ranelagh: The Incomparable Life of Robert Boyle's Sister* (Chicago: University of Chicago Press, 2021).

Mauer, Margaret. "Reviving Drowned Flies and Burnt Plants in the Early Modern Household: Alchemical Recipes and Domestic Experiments in Peter Temple and Hester Pulter." *EMSJ*, 9, 2024, 52-71.

[8] Deborah E. Harkness, "Managing an Experimental Household: The Dees of Mortlake and the Practice of Natural Philosophy," *Isis* 88, no. 2 (1997): 247–6; Simon Werrett, *Thrifty Science: Making the Most of Materials in the History of Experiment* (Chicago: University of Chicago Press, 2019).

[9] Wendy Wall, "Distillation: Transformations in and out of the Kitchen," in *Renaissance Food from Rabelais to Shakespeare: Culinary Readings and Culinary Histories*, ed. Joan Fitzpatrick (Burlington, VT: Ashgate, 2010); Edith Snook, "'The Beautifying Part of Physic': Women's Cosmetic Practices in Early Modern England," *Journal of Women's History* 20, no. 3 (2008): 10–33.

[10] Elizabeth Spiller, "Recipes for Knowledge: Maker's Knowledge Traditions, Paracelsian Recipes, and the Invention of the Cookbook, 1600-1660," in *Renaissance Food from Rabelais to Shakespeare: Culinary Readings and Culinary Histories*, ed. Joan Fitzpatrick (Burlington, VT: Ashgate, 2010), 55–72; Harold J. Cook, *The Decline of the Old Medical Regime in Stuart London* (Ithaca: Cornell University Press, 1986).

[11] For example, when comparing domestic distillation and alchemy, Wendy Wall describes alchemy as "a somewhat esoteric male learned art with a particular history" ("Distillations: Transformations in and out of the Kitchen," 91), while Michelle DiMeo writes that Lady Ranelagh's engagement with alchemy "reached beyond the practical into the theoretical and experimental – something seen with only a few of her female peers, such as Queen Christina of Sweden or Anna Maria Zieglerin" (Lady Ranelagh, 7). Some of this difficulty stems from how scholars define alchemy. Alchemy, chemistry, and chymistry were often used interchangeably in seventeenth-century England. The scholarly use of "chymistry" was introduced by William Newman and Lawrence Principe to encompass the array of theories and practices that existed in early modern England. See William R. Newman and Lawrence M. Principe, "Alchemy vs. Chemistry: The Etymological Origins of a Historiographic Mistake," *Early Science and Medicine* 3, no. 1 (1998): 32-65. While this use of the term was coined disrupt the modern associations of "alchemy" and "chemistry," the scholarly use of "chymistry" has unintentionally reinforced that alchemy refers exclusively to narrow set of theories and practices – namely, the transmutation of metals or the pursuit of the Philosophers' Stone. Early modern people, however, used the term alchemy (alongside chymistry and various other spellings) to refer to a wide variety of theories, practices, and productions – including those in the early modern household.

[12] Peter Temple was a knight, Sheriff of Buckingham, and author of *Man's Master-piece* (London, 1658). Little is known about Elinor's life (b. 1653), but after her father's death, she married Richard Grenville of Wotton, her step-brother by her mother's second marriage to the senior Richard Grenville. Recipe book construction is non-linear, so Temple's dedication to Elinor does not provide a start-date, but it does affirm that Temple used this manuscript in the 1650s.

[13] *De Natura Rerum* was attributed to Paracelsus (d. 1541), and Paracelsus was widely believed to be the author in the period. On *De Natura Rerum*'s authorship, see Hiro Hirai, "Into the Forger's Library: The Genesis of *De Natura Rerum* in Publication History," in *Pseudo-Paracelsus: Forgery and Early Modern Alchemy, Medicine and Natural Philosophy*, ed. Hiro Hirai and Didier Kahn, Brill, 2021, 73–91.

[14] *Pseudo-Paracelsus, A new light of alchymie...*, [John] F[rench] trans., (London, 1650),

Mauer, Margaret. "Reviving Drowned Flies and Burnt Plants in the Early Modern Household: Alchemical Recipes and Domestic Experiments in Peter Temple and Hester Pulter." *EMSJ*, 9, 2024, 52-71.

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[15] William R. Newman, *Promethean Ambitions: Alchemy and the Quest to Perfect Nature* (Chicago: University of Chicago Press, 2005), 199-208.

[16] British Library Stowe MS 1077 139r; my semi-diplomatic transcription.

[17] Francisco Alonso-Almeida, "Genre Conventions in English Recipes, 1600-1800," in *Reading and Writing Recipe Books, 1550-1800*, ed. Michelle DiMeo and Sara Pennell (Manchester: Manchester University Press, 2013), 72.

[18] Alonso-Almeida, "Genre Conventions in English Recipes, 1600-1800," 74.

[19] *Pseudo-Paracelsus, A new light of alchymie...*, 56.

[20] As Amy L. Tigner observes, recipes sometimes "function more of an aide memoire rather than a clear set of instructions" (53). See Amy L. Tigner, "Trans-border Kitchens: Iberian Recipes in Seventeenth-century English Manuscripts," *History of Retailing and Consumption* 5, no. 1, 51-70.

[21] On trials on paper, see Leong, *Recipes and Everyday Knowledge*, 71-98.

[22] Temple's critique of this particular recipe should not be understood as a totalizing dismissal of his source text or of alchemy or chymistry broadly. He codifies another recipe from the same pseudo-Paracelsian text and he makes references to "Kimicall" water (BL Stowe MS 1077 140r) and "Chimical Oyl" (BL Stowe MS 1077 141r) as ingredients and notes that he believes the "celestial stone" refers to Roman vitriol (BL Stowe MS 1077 50r). Rather, his evaluation that this recipe is "inconsiderable" is specific to this recipe.

[23] The recipe could be inconsiderable in that it was "not to be considered" ("inconsiderable, adj. and n. A.1.," OED Online. Oxford University Press.) or that it was "of no consequence, unimportant... The opposite of considerable... Hence, Of very small value, amount, or size." ("inconsiderable, adj. and n., 2.a." and "2.b.," OED).

[24] Leong, *Recipes and Everyday Knowledge*, 83. For Temple's use of multiple volumes, see chapter 3.

[25] Leong and Rankin, "Testing Drugs and Trying Cures;" Wall, *Recipes for Thought*, ch. 5.

[26] Wall, *Recipes for Thought*, 212-15.

[27] Leong, *Recipes and Everyday Knowledge*, 112-16.

[28] Leong, *Recipes and Everyday Knowledge*, 76-78.

[29] Leong, *Recipes and Everyday Knowledge*, 174.

[30] *Oxford English Dictionary (OED)*, "waggery, n. 1."

[31] "Knavish" can mean "mischievous, waggish; roguish" ("knavish, adj., 3." OED.).

[32] OED, "cow-itch, n. 1."

[33] Robert Hooke describes testing cow-itch on his own skin in *Micrographia* (London, 1665), 146-147. Congreve's *The way of the world* (London, 1700) uses cow-itch as an analogy: "[he] fidgets off and on his Cushion as if he had... sat upon Cow-Itch" (77), while in Lacy's *The dumb lady...* (London, 1672) cow-itch appears in an on-stage prank (74).

[34] Jo. Jacob Berlu, *The treasury of drugs unlock'd...* (London, 1690), 32. Berlu writes cow-itch is from Jamaica, although the plant is native to Africa and tropical Asia; this may indicate the transplantation of plants to the Caribbean or may simply be a misattribution.

[35] In Lacy's *The dumb lady* (1672), one character puts cow-itch "down [the] neck" of another as a trick (74). Cow-itch is placed in beds or sheets in Andrew Marvell's *The rehearsal transpros'd...* (London, 1672), 50; Samuel Parker's response, *A reproof to the*

Rehearsal transposed... (London, 1673), 276; Richard Head's satire *The English rogue* (London: 1680), 108; and Robert Dixon's poem *Canidia, or The witches...* (London, 1683), 76.

[36] Richard Amyas, *An Antidote Against Melancholy. Or, a Treasury of 53. Rare Secrets & Arts Discovered, by an Expert Artist, Richard Amyas...* (London, 1659), 4.

[37] Though Temple does not provide a citation, Amyas's *Antidote Against Melancholy* is a possible source. On the same page that details using cow-itch, Amyas includes a recipe resembling Temple's recipe for cooking capons in different ways on the same spit (4).

[38] For example, Hugh Plat's *Jewel-House* (London, 1594), 6 includes the recipe, "A perspectiue Ring that will discover all the Cards that are neere him that weareth it on his finger," or, a ring with a piece of glass that allows the wearer to cheat at cards. For additional examples, see *The Recipe Project's* special issue "Recipes at Play," Elizabeth Hunter and R. A. Khashanipour, guest eds., (Winter 2023).

[39] Amyas, *Antidote Against Melancholy...*, 8.

[40] Paula Findlen, "Jokes of Nature and Jokes of Knowledge: The Playfulness of Scientific Discourse in Early Modern Europe," *Renaissance Quarterly* 43, no. 2 (1990): 292-331.

[41] Ani Govjian, "Tricks of Faith: Experiment, Proof, and Virtue on the Early Modern Stage," PhD diss., UNC Chapel Hill, 2022.

[42] Pliny writes: "When flies have been killed by damp they can be resuscitated by being buried in ashes" in Pliny, *Natural History*, Volume III: Books 8-11, translated by H. Rackham. Loeb Classical Library 353. Cambridge, MA: Harvard University Press, 1940, Book XI, XLIII; 506-507. See also "From Benjamin Franklin to Jacques Barbeu-Dubourg, [End of April 1773?]," *Founders Online*, National Archives, <https://founders.archives.gov/documents/Franklin/01-20-02-0109>, from *The Papers of Benjamin Franklin*, vol. 20, January 1 through December 31, 1773, ed. William B. Willcox (New Haven: Yale University Press, 1976), 189-190.

[43] Pliny describes flies resuscitated with ashes, while Benjamin Franklin describes them drowned in wine. Pliny's observations are listed among flies' attributes, whereas Franklin playfully speculates about humans being preserved and revived in the distant future.

[44] I have not found peer-reviewed studies on reviving drowned flies using salt and heat, but numerous peer-reviewed experiments study the anoxic recovery of *Drosophila melanogaster* – that is, the factors that allow common fruit flies to recover from oxygen deprivation. For example: Krishnan, Santosh N., Yi-an Sun, Amir Mohsenin, Robert K. Wyman, and Gabriel G. Haddad. "Behavioral and Electrophysiologic Responses of *Drosophila Melanogaster* to Prolonged Periods of Anoxia," *Journal of Insect Physiology* 43, no. 3 (March 1, 1997): 203-10; Benasayag-Meszaros, Raquel, Monica G. Risley, Priscilla Hernandez, Margo Fendrich, and Ken Dawson-Scully, "Pushing the Limit: Examining Factors That Affect Anoxia Tolerance in a Single Genotype of Adult *D. Melanogaster*," *Scientific Reports* 5, no. 1 (March 17, 2015): 9204.

[45] I am indebted to entomologists Elizabeth Moore, Rob Dunn, and Adrian Smith at North Carolina State University for their help understanding the insect physiology that makes this recipe possible. I am the only one to blame for this phone analogy.

[46] For example, see the Reddit discussion: "ELI5: What Actually Is Occurring When You Bring a House Fly Back to Life with Salt?" Reddit. R/Explainlikeimfive, May 8, 2016.

Mauer, Margaret. "Reviving Drowned Flies and Burnt Plants in the Early Modern Household: Alchemical Recipes and Domestic Experiments in Peter Temple and Hester Pulter." *EMSJ*, 9, 2024, 52-71.

www.reddit.com/r/explainlikeimfive/comments/4igaqd/eli5_what_actually_is_occurring_when_you_bring_a/.

[47] Simon Werrett, *Thrifty Science: Making the Most of Materials in the History of Experiment* (Chicago: University of Chicago Press, 2019), 201.

[48] "Un-Dead Fly." <http://www.darylscience.com/Demos/DeadFly.html>.

[49] First Aid Mart Official Blog. "Resuscitate a Housefly? Learn Fly CPR!," July 24, 2013. <https://firstaidmart.com/blog/resuscitate-a-housefly-learn-fly-cpr/>.

[50] These six Youtube videos show flies being revived using salt. Additional Youtube videos, typically framed as magic tricks, show heat reviving stunned, frozen, or drowned flies.

Dead Fly Resurrection, 2007. <https://www.youtube.com/watch?v=1-sbSdlhUXY>.

"How to Drown a Fly and Bring It Back to Life," 2013.

<https://www.youtube.com/watch?v=khajL0kf-00>.

"How to Revive a Fly :D - YouTube," 2013.

<https://www.youtube.com/watch?v=WymAaTRyfyA>.

"How To: Revive a Fly (Bringing the House Fly Back to Life)," 2015.

<https://www.youtube.com/watch?v=U62RqGuz9g0>.

"Completely Useless Knowledge: How to Bring A Dead Fly Back to LIFE Using Salt," 2021.

<https://www.youtube.com/watch?v=bKNyv3JhqBc>. How to Revive a Dead Fly #shorts.

<https://www.youtube.com/shorts/f9-jixhFAX4>.

[51] "Why Is It That You Can DROWN a Fly, Then Dry It out with Salt, and It Comes Back to Life?" Reddit. R/Askscience, September 26, 2013.

www.reddit.com/r/askscience/comments/1n6dfv/why_is_it_that_you_can_drown_a_fly_then_dry_it/.

[52] Werrett, *Thrifty Science*, 42-63. Deborah Harkness's and Steven Shapin's foundational work foreground how natural philosophers utilized domestic spaces. Deborah E. Harkness, "Managing an Experimental Household: The Dees of Mortlake and the Practice of Natural Philosophy." *Isis* 88, no. 2 (June 1997): 247-62; Steven Shapin. "The House of Experiment in Seventeenth-Century England." *Isis* 79, no. 3 (September 1988): 373-404.

[53] Werrett, *Thrifty Science*, especially 167-201. The Royal Society is a notable, though not singular, example of this shift towards institutional experimentation outside of domestic spaces.

[54] The *OED* defines palingenesis as "regeneration of living organisms from ashes or putrefying matter" ("palingenesis, n.1.", *OED*), roughly translating to "again reborn" in Greek.

[55] For example, Robert Boyle characterizes palingenesis as "chymical," writing: "those Chymical Experiments by which Kircherus [Athanasius Kircher], Quercetanus [Joseph du Chesne] and others, are affirmed to have by a gentle heat been able to reproduce in a well-closed Vials the perfect Idea's of Plants destroyed by fire..." (10). Robert Boyle, *About the Possibility of the Resurrection* (London, 1675).

[56] Wendy Wall, "What Else Is In the Manuscript? Or, Where Did Pulter's Poems Live?," in *The Pulter Project*, eds. Leah Knight and Wendy Wall (2018).

<https://pulterproject.northwestern.edu/#what-else-is-in-the-manuscript/>

[57] Hartman edited, annotated, and published two recipe volumes attributed to Digby after his death: *Choice and Experimented receipts in physick and chirurgery...* (London: 1668)

Mauer, Margaret. "Reviving Drowned Flies and Burnt Plants in the Early Modern Household: Alchemical Recipes and Domestic Experiments in Peter Temple and Hester Pulter." *EMSJ*, 9, 2024, 52-71.

and *A choice collection of rare secrets and experiments in philosophy...* (London: 1682).

[58] Alice Eardley, "Lady Hester Pulter's Date of Birth," *Notes and Queries* 57, no. 4 (2010), 498-501.

[59] The untitled poem is numbered "40" in the section "Emblems."

[60] On alchemy in Pulter, see Jayne Archer, "A 'Perfect Circle'? Alchemy in the Poetry of Hester Pulter," *Literature Compass* 2, no. 1 (2005): 1-14; Liza Blake, "Hester Pulter's Particle Physics and the Poetics of Involution," *Journal for Early Modern Cultural Studies* 20, no. 2 (Spring 2020): 71-98.

[61] Hester Pulter, "View But This Tulip" (Poem 40), in *The Pulter Project*, eds. Leah Knight and Wendy Wall (2018), 1-10. <https://pulterproject.northwestern.edu/poems/ee/view-but-this-tulip-emblem-40/>. This is my semi-diplomatic transcription based on the digitization of the manuscript, now University of Leeds BC MS Lt q 32.

[62] Konrad Gesner, *The Treasure of Euonymus*, trans. Peter Morwying, London, 1559, 66.

[63] Peter Daly, *Literature in the Light of the Emblem* (Toronto: University of Toronto Press, 1998).

[64] Kenelm Digby, *A discourse concerning the vegetation of plants, Spoken by Sir Kenelme Digby at Gresham College on the 23 of January, 1660: at a meeting for promoting the philosophical knowledge by experiments* (London, 1661), 73. See Eardley, "Hester Pulter's 'Indivisibles,'" especially 117-41, 130; Frances Dolan, "Hester Pulter's Renaissance." *English Literary Renaissance*, 50, no. 1 (2020), 32-39, 36.

[65] Joseph du Chesne, *The Practise of Chymicall, and Hermeticall Physicke, for the Preseruation of Health*, trans. Thomas Tymme (London: 1605), F3v.

[66] Stefan Graham Christian observes, "Pulter's selection of flowers... is remarkably similar to the kinds of flowers really cultivated in gentry gardens at the time..." Stefan Graham Christian, "The Poems of Lady Hester Pulter (1605?-1678): An Annotated Edition." PhD diss., University of Massachusetts Amherst, 2012, 48.

[67] Dolan, "Hester Pulter's Renaissance," 36.

[68] Alice Eardley, "'Shut up in a Countrey Grange': The Provenance of Lady Hester Pulter's Poetry and Prose and Women's Literary History," *Huntington Library Quarterly* 80, no. 2 (2017), 345-359. The manuscript did not reach a larger scholarly audience until 1996. See "The Manuscript," in *The Pulter Project*, eds. Leah Knight and Wendy Wall. 2018. <https://pulterproject.northwestern.edu/about-hester-pulter-and-the-manuscript.html>.

[69] Thirteen of Pulter's fifteen children predeceased her. Many of her poems consider death, grief, and the afterlife. Some poems, including "View But This Tulip," explore eschatological questions of resurrection and the Last Judgment. "The Poet," in *The Pulter Project*, eds. Leah Knight and Wendy Wall. 2018. <https://pulterproject.northwestern.edu/about-hester-pulter-and-the-manuscript.html>.

[70] Eardley, "'Shut up in a Countrey Grange.'"

[71] Samantha Snively, "Making Knowledge in Seventeenth-Century England: Recipes, Writing, and Experimentation." Ph.D diss., University of California, Davis, 199.

[72] Line 44 includes a revision where "the" appears to have been changed to "thy."

[73] On the interconnectedness of theory and practice, see Pamela H. Smith, *The Body of the Artisan: Art and Experience in the Scientific Revolution* (Chicago: University of Chicago Press, 2006).

Mauer, Margaret. "Reviving Drowned Flies and Burnt Plants in the Early Modern Household: Alchemical Recipes and Domestic Experiments in Peter Temple and Hester Pulter." *EMSJ*, 9, 2024, 52-71.

- [74] Michael Martin, *Literature and the Encounter with God in Post-Reformation England* (Burlington, VT: Routledge, Ashgate, 2014), 88; Jessica Wolfe, "'Men Are Lived Over Againe': The Transmigrations of Sir Thomas Browne," *Huntington Library Quarterly* 83, no. 1 (2020): 61–94, esp. 75, 79–82.
- [75] Thomas Browne, *Religio Medici*, London: 1642, 91–92.
- [76] *The Humble Advice of the Assembly of Divines...* [Westminster Confession of Faith]. London: 1646, 53.
- [77] Dolan, "Hester Pulter's Renaissance;" Snively, "Making Knowledge in Seventeenth-Century England," 203.
- [78] Dyani Johns Taff, "Death and Revolution: Thinking with Hester Pulter," *The Sundial*, October 27, 2020. <https://medium.com/the-sundial-acmrs/death-and-revolution-thinking-with-hester-pulter-848d5c966b6d>.
- [79] Snively, "Making Knowledge in Seventeenth-Century England," 203.
- [80] Digby writes: "I confesse it would be no small delight to me to see this experiment, with all the circumstances that Quercetan [du Chesne] setteth down. Athanasius Kircherus at Rome assured me he had it done; and gave me the processe of it. But no industry of mine could effect it. Another I did, by instructions from the former Author; and I found it exactly true as he recounteth it." Digby, *A discourse concerning the vegetation of plants...*, 75–76.