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Making a specimen

Abstract:

The manufacture of artificial fruit specimens gained popularity in the late nineteenth century. Despite holding forms of hundred-year old fruits, these specimens, often made from wax, resins and papier-mâché have changed over time as colourants have faded, surfaces have cracked and forms have melted. Responding to two collections of artificial fruit – the Museo della Frutta in Turin and the Museum of Economic Botany in Adelaide – this essay subtly engages with themes of reproduction, translation and change through specimens of fake fruit that oscillate between curiosity, artefact and junk. Drawing on a confluence of life writing and material culture studies, the piece adopts an approach to object writing that foregrounds material change and transformation through observing the quiet dynamism of objects created with the intention of capturing stasis. By conceptualising materiality as implicated in subjectivity and as something inherently unstable, the piece itself participates in these objects' continual unfolding in a world that is in constant flux.

Biographical note:

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Keywords:

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I.

When I tell Elisa that I will come to Turin to see the world's largest collection of fake fruits, she pauses a moment and then says, "yes, I know it". That she doesn't ask why comes as no surprise – my curiosity is assumed. Perhaps this assumption is apt given the collection is invariably described as 'curious' in reviews online. Curious objects tucked into a suite of curious-looking rooms, dimly lit and panelled with wood, in an imposing building with arched windows and a stone façade.

Arriving in Turin in late summer, the sun is bright and the shadows crisp. The severe contrast makes the building look both flattened and hyperreal. As well as the Museo della Frutta (Museum of Fruit) this building also houses the Museo di Anatomia Umana (Museum of Human Anatomy) so naturally, we visit both.

Entering the Museo di Anatomia Umana, Elisa tells me it has changed a lot since the last time she visited. Medical specimens like skeletons and preserved organs in jars were once jumbled together in display cases, with haphazard signage. Now, they are evenly spaced, organised with labels describing the purpose of each model, and occasionally recording how it came into the collection. Perhaps because each item is so neatly displayed, framed by the walls and cabinets, my eyes are drawn over and over again to innards of the human body. Sculpted from wax, a torso with the skin peeled back to reveal the intestines looks wet and sticky. The wax beads look like sweat, and after looking at the first few display cases I feel so nauseous that I have to sit down on one of the wooden benches that run along the central aisle and look away from the displays.

Half an hour or so later, we walk back up a white marble staircase with black seams that look like veins. I trace my hand along the balustrade, the coolness of the stone providing some relief for my lingering nausea.

The first thing I notice about the Museo della Frutta is that it is much smaller than the Museo di Anatomia Umana. It has only one main display space, its walls lined with shallow, glass-paned wooden cupboards. Within them, rows of fruit rest on what look like trophy plinths as though emulating a minimalist greengrocer. Soft shadows form at the base of each fruit. They have a slight flattening effect as though each specimen is a painting. Each one is labelled with its species and type, and we walk around the room slowly, looking for slight variations between different kinds of apples, peaches, pears and grapes.

Looking at a row of apples, the word 'curious' returns to mind. Like the anatomical models, there is an uncanniness to them, but they don't make me recoil. Rather, I find the glass barriers mildly irritating, preventing closer inspection of the specimens contained within. Most of the models are not simply good likenesses, they are accurate to the point of deception. I notice that on one dark red apple specimen the painted surface is disrupted. The coloured top layer has shrunk as it has dried, pulling away from the translucent waxy layer below it. These breaks in

the surface form a gaping criss-cross pattern like scars. Once I see this pattern, I begin to notice it on other fruit specimens too, as well as deep sharp cracks that lend the surface of pears and plums the appearance of shattered glass. I find myself drawn to these disjunctures that pull me out of the illusion.

Among the now obsolete meanings of the word ‘curiosity’ is ‘a careful attention to detail’, which speaks to a quiet kind of observation, allowing small things to make themselves known. Perhaps this is what has drawn me here, a desire to see through something seemingly solid, to glimpse the instability of the material world in details like these, on model specimens made to resist the passage of time.

The specimens in this collection were made by a modeller called Francesco Garnier Valletti, who began his career as a confectioner, before moving on to wax flowers and eventually fruit. Known throughout Europe for his ability to sculpt perfect imitations of fruit, down to matching their exact weight, he spent time in the imperial courts of Vienna and St Petersburg, and throughout the 1850s won numerous prizes including thirty-two medals for his skills. At an event in Vienna, his fruit replicas, displayed among real fruit specimens, were not detected by visitors, a deception which won him 500 lire, equivalent to about 2,500 euros today.

By the nineteenth century, wax fruit specimens were primarily valued in the study of fruit cultivation, known at the time as pomology. They functioned as reference models of different varieties, preserving them beyond their point of decay. However, in Europe, models of fake fruit made from wax – as well as glass, marble and faience – are known to have been collected and displayed as early as the seventeenth century. Initially, they were decorative, used to create three-dimensional still-life arrangements and dinner table displays, and were often served alongside real fruit to prompt table-talk (Lechtreck, 2003, p. 304). Sometimes they were also edible, sculpted from marzipan, blown sugar and tragacanth, a natural gum that was sometimes referred to as ‘sweet stuff’ or ‘fluid sugar’ in recipes of the time. In his nineteenth-century book on wax work, Josef Meisl reflects on moulding almonds from wax, writing that “in doing so one can copy the almonds so exactly that, if they are mixed with real ones, they are not easily recognisable as imitations until someone tries to eat them” (Meisl, 1837, p. 108).

The illusory appeal of these models extended into the nineteenth century as well, where it was fashionable among collectors to hide wax specimens, much like Garnier Valletti’s, in boxes affixed to walls, which were covered by paintings of the same fruit. As a party trick, the paintings could be removed, revealing their sculpted counterparts on the shelves behind them. Looking at the evenly spaced specimens here, I wonder if memories of these boxes linger in the curation of the displays.

The idea of trickery is not something that had immediately occurred to me before I visited the Museo della Frutta, although perhaps it should have. The specimens elicit an unexpected sense of delight for depictions of items that at first glance seem so mundane. Elisa and I gesture at them, calling each other over, asking one other if we’ve ever tasted a particular kind of apple or pear. Later I learn that most of the varieties are extinct, the models essentially traces of fruits

that were farmed out of existence through large-scale agricultural practices that favoured fewer varieties. The surfaces of the specimens continue to intrigue me too – the deep cracks I noticed earlier, that break through painted apple skins, imply the presence of material mixtures containing different components, pulling and stretching as they dry at different rates, until they break apart, rendering this tension visible.

The signage in the museum is exclusively in Italian, mostly comprising quotes from Garnier Valletti himself. I can make some of them out, filtering familiar-looking words through English and my limited Spanish, but their meaning is flat and fragmented until Elisa translates for me, explaining tone and nuance, like “this is very petty”, or “he is bragging here”, and “ah see, now he is a bit happier”. These quotes construct an image of Garnier Valletti as a talented but disgruntled artisan for whom no amount of recognition or compensation was enough. In one quote he refers to Girolamo Segato, an Italian naturalist, cartographer, Egyptologist and anatomist, who developed the particularly gruesome skill of transforming human flesh into stone. His quote, painted on the wall, reads, “Segato died with his secret on how to petrify blood and human flesh and no one managed to replicate his secret, and I will die without divulging my secret on how to imitate grapes if I don’t get properly compensated”.

It is difficult to say whether there is truth to Garnier Valletti’s perception that his work was not adequately valued. He certainly received recognition, but recognition did not translate into wealth. By the 1850s, he kept increasingly to Turin, where he helped to establish the Museo Pomologico (Museum of Pomology), which formed the basis of the Museo della Frutta collection. Garnier Valletti became the chief modeller, but by 1860 the museum society had disbanded. From 1886 he taught lessons on making fake fruit to both professional and amateur pomologists at the Agrarian Committee of Turin, but was eventually suspended because he refused to share his secrets with students. A few years later, in his late eighties, he attempted teaching again when he was offered a post at the Accademia di Agricoltura (Academy of Agriculture), but he only held this position for a few months before he died.

In a section of the museum that describes his process, we find a display of moulds alongside some of Garnier Valletti’s half-finished specimens. Borrowing techniques from anatomical modelling, he made plaster moulds directly around real fruits. Once the plaster set, he split the moulds into two pieces. He then cast his specimens using a technique called *sciacquo*, in which a hot mixture of rosin, wax and plaster was poured inside the mould, flowing into the shape of the now absent fruit specimen. As the wax mixture cooled it set extremely hard, at which point he pressed each half-form carefully out of the mould, placed a piece of paper inside recording his name and the year, and then joined the halves together to form an enclosed shell. He then smoothed bumps and blisters on the surface, sanding them down to mimic the flatness of an apple skin or the shape of a pear. His final step was to paint the specimens, which were suspended by metal wires inserted at their tips, building up smooth layers of paint to create detail. Finally, the wires were trimmed and coated with wax to imitate stalks – wax, rosin and plaster transformed into fruit.

On a sign near the didactic display, I parse the Italian text, my eye catching on the word ‘autore’. Although I know the specimens are fake, I find myself increasingly searching for some physical sign of authorship that ties them to their maker. I look for brushstrokes and lingering fingerprints, imprinted into the surface – evidence of touch, of being made, and perhaps given the recent refurbishment of the collection, of being restored – but if there are any, they have been hidden from view through the glass panes of the display cases by discerning curators.

Beside the apple display, a row of peaches is arranged in different orientations, some with their stalks at the top, others with their stalks hidden. One peach is completely upside down, the tip that is usually at the bottom of the fruit pointing upwards like a little hat. Their forms have a fuzzy appearance, as though there is some kind of texture applied over or in the painted shades of red, yellow and green that have been used to colour the surfaces. To create this particular effect, Garnier Valletti sprinkled his specimens with powdered wool after painting them (Marks, 2019, para. 7). The surface softens, obscuring each layer of his process beneath a fuzziness that blurs the line between specimen and cabinet, or perhaps artifice and reality.

The exact recipe Garnier Valletti used for his fruit specimens apparently came to him in a dream (Pogliano, 2007, p. 357). He recorded these recipes in his *Book of Secrets*, a seven-hundred-page tome that Elisa tells me he actually titled “The Most Important Manuscripts of Secrets and Recipes that will Allow People to Make a Living While Travelling Around the World”. It is a kind of commonplace book, containing notes pertaining to his work, but also political commentaries, complaints, tips for good health, and various ideas including a recipe for imitation wine. He even explained how to keep a dog loyal in a bizarre set of instructions that involved stuffing bread crumbs under one’s armpits before going to sleep and feeding the sweat-soaked morsels to the dog the next morning.

There is a sense in his writing that money might be made and freedom might be gained by bending the will of others or deceiving them in some way. In the nineteenth century, part of the appeal of pomological specimens was the illusion that they could circumvent the natural rhythms of the seasons. Rather than having to wait for a specific harvest to obtain a ‘Hoary Morning’ apple or a ‘Rousselet Jamain’ pear, which would rot within a few days, these specimens were available all year round and could, conceivably at least, last forever.

The human capacity to imitate and make copies is what philosopher Walter Benjamin calls the “mimetic faculty” (Benjamin and Tarnowski, 1979, p. 65). He argues that while nature is capable of creating similarities – seen, for example in the ‘images’ that appear in slabs of marble – intentional imitation and copying are uniquely human skills. This process could be thought of as a kind of translation. Based on this notion of mimicry, Swedish-American poet and translator Johannes Göransson sets out a model of translation that doesn’t seek to master or contain but rather brings the body into the act of translation, through a process of taking something into the self and then making copies of it (Göransson, 2024).

Applying this idea of mimicry to Garnier Valletti's collection of specimens, the rows of apples and pears, peaches and apricots, and bunches of grapes become less about exerting a sense of mastery over nature. Rather they become a series of material translations, the skin and flesh of fresh fruit translated by human hands into wax and rosin, perhaps unintentionally revealing the fragility of human attempts to freeze a moment in time. They function in much the same way museums do – translating 'things' into artefacts, diminishing an object's usefulness in order to allow it to persist.

In a cabinet close to the entrance, there is a row of grapes in varying stages of degradation. To achieve their translucency, Garnier Valletti added alabaster powder to his mixture. Apparently, this invention was inspired by Heinrich Arnoldi, a German artisan whose specimens form the basis of the collection at the Museum of Economic Botany in Adelaide, but the inclusion of this material made his mixture somewhat unstable. The specimens here are shrivelled. Large cracks run through each tear-shaped fruit, their surfaces puckered and broken. Shiny rosin with the consistency of sap peeks through the ruptures. I am unsure whether I am seeing a failure in the alabaster-wax mixture or the intentional reconstruction of rotting fruit, until Elisa translates for me, confirming, in this case at least, it is the latter.

Hung by the grapes is a photograph – a sort-of self-portrait, sort-of still life – of Garnier Valletti. He appears as a reflection in an oval-shaped mirror hung above an arrangement of fake pears that sits in the foreground of the image. His body is shrouded in a black garment, giving his face the appearance of floating in space. The pears are placed in a Roman-style platter adorned with branches of leaves and they sit on a table covered in draped fabric that also extends over the wall behind them. It occurs to me that at least some of the pears in this picture are likely to be in the museum. Garnier Valletti, in his semi-shrouded reflection, looms behind them, disembodied like a disgruntled ghost. It is not unusual for artists to include mirrors in still life images. Often, they reflect something of the scene beyond the picture plane, occasionally showing a glimpse of the artist, and hinting at the presence of a world where time will keep moving. It takes me a while to pinpoint, but what I find so odd about this image is that I cannot see his hands.

Elisa taps my arm. I look up as she says "this is a good one". She is pointing towards another painted quote, and translates for me as my eyes scan the Italian text on the wall. She reads, "the imitation of grapes was the best discovery I made to the benefit of our agriculture and was highly appreciated by whoever knew my work. It was an extremely difficult process and even after two years of trials I couldn't reach the level of perfection I desired". My eyes catch on the word "artefazione" painted on the wall. Unable to place it in her translation, I ask what it means. Elisa tells me she has translated it as 'imitation,' but, she says, "it is actually a very beautiful word that means 'the process of making an artefact'".

II.

The air is cool and dry inside the world's last remaining economic botany museum in Adelaide on Kurna Country. Two magnolia trees flank the entrance of the museum, their roots growing into the loamy earth of the Botanic Gardens. Once a plain covered in red-green tussocks of kangaroo grass, the gardens now arc around the inner city in manicured segments of lawn. Each time the door slips open, the sound of cicadas briefly competes with the dull hum of air conditioning that fills the museum with white noise.

I walk slowly along the aisles, peering into the long vitrines that run down the centre of the room. Full of dried specimens and sculpted models, they are arranged on pieces of beige cardboard with typed labels that explain the organisation of each grouping according to taxonomic ranking. On the table dedicated to the lily family, the onion family, and the asparagus family, dried out onion bulbs and garlic cloves are arranged alongside watch glasses and test tubes containing dried samples of dragon's blood and lily of the valley, with short captions explaining their origins and use. Amid this array is a bunch of white asparagus. Although reasonably life-like, the gloss of the stalks is too matte and paint pools in the ridged patterns of the asparagus tips.

Hidden behind the temporary exhibition space, which currently houses a gift shop, more vitrines are lined up along the walls. Each case is full of jumbles of apples, pears, apricots and plums that sit in nests of yellowed paper labels, brittle and creased. Close to the entrance, a collection of mushrooms is packed tightly together, each stem jutting out from the base of the vitrines in different directions, their caps like jostling umbrellas. Some have toppled over and rest on their sides. At the front of one cabinet, a large piece of fungus that looks like a brown coloured wing is laid down flat and I can see a little spike protruding from the bottom, where it must have once clipped into a base so that it could stand upright. It looks as though it has been uprooted.

A newer label, printed onto the base of one of the vitrines, attributes these models to Arnoldi and Co, a company established in the mid-nineteenth century by Heinrich Arnoldi, a member of the Thuringen Pomological Society in Gotha, Germany. Arnoldi initially created fruit specimens from porcelain, but found this material both unpredictable and commercially limiting. The specimens would shrink during the firing process, compromising their accuracy, and they were also liable to break, particularly when in transit. To solve these problems, he began making specimens using plaster and a kind of papier-mâché mixed from wood pulp and kaolin. The mixture was shaped using half moulds, like Garnier Valletti's. Fruit moulds typically split top from bottom, while the mushroom moulds split left from right, each containing half a stem and half a cap. Once dry, the model halves were adhered together and coated with a thin layer of plaster. These white casts were then painted to emulate the appearance of the real specimen (Melo et al, 2023, pp. 3-4). Sinking into the porous plaster, the oil paint that was used to depict striations and splotches of fruit skins now looks dry and matte. Unlike Garnier Valletti's models, they are shadowy counterparts, not objects of deception.

Arnoldi's collections of mushrooms were sold both individually and in consignments through a catalogue called the 'Arnoldische Pilzsammlung' (Arnoldi Mushroom Collection, Melo et al, 2023, p. 2). The labels scattered through the mushroom display are hand-written on paper with printed green or red borders, indicating whether the mushroom varieties are safe to eat or poisonous. The written text is faded and at times difficult to read. This information, now so readily available elsewhere, hovers between usefulness and curiosity.

Looking at these specimens now, especially the fruits, they take on new significance as so many of the varieties represented here no longer exist. As though living up to this legacy visually, the skins of some of the specimens have faded to a yellow-green that verges on white. Of these ghost specimens, I keep returning to what the label informs me is a 'long white dechants pear'. It is a slender specimen that is so pale that, were the lights to suddenly turn off, I wonder if it might glow. Later, when I search this pear online to see if the parched colour is intentional, I can only find illustrated examples where it ranges from speckled brown to green to yellow. In the book *Schweizerische Obstsorten* (Swiss Fruit Types) from 1863, two examples of the full fruit and a sliced cross-section are illustrated in bright colour against a background of skeletal leaf outlines.

In a caption explaining the origin of the museum's fruit and mushroom samples, there is a short note that describes a collection of wax fruit specimens made in 1888 to represent South Australia's produce at exhibitions in Melbourne, London and Adelaide. An article from 1889 describes these specimens as "very accurately moulded" pointing particularly to "the apples, figs, plums, apricots, quinces and fruits of the citrus tribes being remarkably natural in appearance" ([Wax Fruit Specimens], 1889, p. 7). However, as the story on the label unfolds, "only one lonely wax pomegranate remains from that collection". In an essay from 2016, literary scholar Heather Kerr writes that surrounded by other specimens, this single pomegranate is "alone in a crowd" (Kerr, 2016, p. 146). Made from wax, it is materially distinct from the Arnoldi specimens that surround it, but through the glassy surface of the vitrine I struggle to locate it. In a case of papier-mâché pears and plums, my impulse is to see all of the specimens collectively, perhaps ungenerously lumping them into a broad taxonomy of fake fruit. When I finally spot it, the pomegranate is recognisable because of its multi-pointed stamen that looks like a crown. Its body is a mottled reddish-brown with a spring green underlayer poking through at its base. The surface is slightly translucent as though the dyes or pigments used to colour it are encased beneath a thin transparent film.

I later find a clue as to what happened to the other wax specimens in an extended review of the museum from 1921, where a journalist describes them as "heat-flattened and disheartened-looking" (Our Botanic Paradise, 1921, p. 6). Further articles indicate that the specimens continued to decay over the decades. In one such article from 1936 they are described as "a misshapen mass of wax, broken and melted, covered in dust" (Coombe, 1936, p. 20), and by 1938 "some of the pears and quinces have collapsed and gone quite flat, others have gaping holes and show their empty interiors" (Strange Relics in Garden Museum, 1938, p. 3). Kerr also observes that the surface of the pomegranate has cracked and melted. Looking at the

specimen in the back corner of the vitrine in dim light I find this difficult to discern until it occurs to me that these changes are less likely to look like wax drips on a candle and more like a slumped or concave surface that has begun to lose its form. Perhaps the shallow indentations that I initially understood to be mimicking the shape of the fruit, are actually the residual effects of a particularly hot summer.

Materially, wax is an amorphous solid, meaning the way it shifts between material states is characterised by a glass transition phase. In this phase, it moves from a relatively brittle solid state and into a material that is rubbery and soft, eventually turning to liquid as the temperature increases. Wax is solid at room temperature but only needs to reach about thirty-seven degrees Celsius, more or less the temperature of the human body, before it softens. When it hardens again, it retains shapes that have been impressed into it, which is one of the qualities that makes it adept at rendering realistic reproductions. In the case of fruit specimens, or medical specimens for that matter, once the form of the original is impressed into wax, it isn't intended to change despite how easily it could. If it does reform, it happens by accident, apples and pears melting and slumping, the innards of the human body forming beads of sweat.

Wax has been used as a metaphor for memory, preserving impressions of other things as it presses against an ever-changing world. I think back to the scars on the apple specimens in Turin where the wax mixture had reticulated as it dried. Scanning beyond the wax pomegranate, the brittle plaster of the Arnoldi specimens is crisp. The forms are intact, the surfaces simply dulled. The changes here are subtler than wax, occurring instead through the gradual imbibing of stains and dirt into a plaster surface, while colour in the paint layer disappears. These specimens are less pliable than porous, palimpsests rather than impressions, the material memory manifesting in the simultaneous processes of accumulation and fading, while continuing to look more or less the same.

I take a photo of a display case of apples and text it to Elisa. Shadows and tracts of light that shift and move as I walk around the vitrines are stilled in the image, the reflection of my hand and phone hovering over the glass. I wonder if the damaged wax specimens were ever melted and remoulded. Perhaps in their destruction their substance was allowed to quietly persist beyond their brief mention on a caption. More likely though, they were disposed of, broken and dust-embedded, absorbed into garbage interred on the same land that European agricultural practices sought to brutally transform.

Kerr reflects that the 'lonely pomegranate' elicits a sense of connection between object and human, encouraging the visitor to reflect "on lost and last things, on washed up or stranded objects" (Kerr, 2016, p. 146). I don't feel this exactly. Instead, it calls to mind an ungenerous review of the museum from 1946, in which a correspondent writes:

here is a fine building facing rising ground, filled with decayed wax fruit and papier mâché moulds of material redundantly labelled bread, cake, etc. The building housing this astonishing collection of junk is carefully closed on Saturdays and public holidays,

lest any ill-advised member of the public should chance to think of entering (Ballantyne, 1946, p. 8).

The use of the word ‘junk’ feels particularly harsh, especially since I find the space charming if somewhat melancholy. But there is truth to it, as the collection reads almost as a bundling of vestiges, oscillating between cultural heritage and junk depending on what side of the glass vitrine it sits and the proclivities of the person perceiving it.

Looking up from the vitrines and out towards the main part of the exhibition space, cabinets jut out from the walls so that displays on both sides are visible. In one, samples of wood are stacked like books. Another features an array of compounds, amber-coloured liquids in glass vials and blocks of translucent resins. On top of each cabinet is a single bust whose glazed eyes look to the centre of the room. They sit like sentinels guarding their packed cabinets, peering down from their perches over the two visitor paths that run down either side of the central flat vitrines. An article from 1884, published not long after the museum opened by a writer simply called Diana, describes each bust as, “some renowned scientific man” before going on to identify them as “the great natural philosophers – Sir Isaac Newton and Johannes Müller; the famous Swedish chemist J Berseleius; the renowned French botanist, A de Jussieu; and those intellectual giants, Linnæus, Faraday, Liebig, R Virchow, CL Willdenow, Sir J Banks, and L von Buch” (1884, p. 14). Cast in white plaster with peaked collars and curled hair, they are all almost identical, forming another taxonomy in the museum alongside wood types and resins, plant families and ‘fake fruit’. Drained of colour, they remind me of the ghostly dechants pear, cast impressions receding into the shadows of the museum.

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