

Title: *Is the new materialism theory a new movement in art and design?*

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Introduction

New materialism is a fundamental idea which I am researching both for this report and through my current practice. The new materialism ideology, of working alongside with nature, rather than against is one of the key principles of my work. I hope to challenge the use of different types of materials and how these materials can be combined. Allowing for the organisms to process as they do in nature and to do their own creation in their own unique and experimental pathways.

My first artist is Dasha Plesen, Dasha showcases a variety of mould, allowed to grow and develop. She has challenged the view that mould is an unpleasant organism and has highlighted its beauty and diversity. Her work personifies the idea of new materialism, both encouraging and letting nature become its own art form.

My second new materialist, Ankia Yi, again harnesses the power of new materialism by incorporating herself into the final outcomes. She encourages a symbiotic relationship between herself and the materials that she uses for her pieces. This involves physical interaction with the organisms to encourage them to change. Through this, she hopes to develop a connection with herself and the natural world. Both practitioners have a fascination with working with radical mycology, working with a variety of fungi and moulds. This process is aimed at enriching experimental outcomes.

My final artist, Zena Holloway, is the last new materialist practitioner I will discuss. Holloway works with plant roots, using them to create delicate sculptural forms that explore the relationship between humans and the natural world. Like the previous two artists and makers examined in this

project, her practice centres on organic materials and highlights the interconnectedness of living organisms. However, Holloway's work particularly focuses on revealing the often-unseen systems that sustain life, encouraging viewers to reconsider their understanding of nature and humanity's place within it.

Holloway's use of plant roots is significant because roots are typically hidden underground and often overlooked, despite their essential role in growth and survival. By bringing these materials to the surface and transforming them into sculptural artworks, she highlights the vitality and agency of non-human matter. This approach aligns strongly with the theory of new materialism, which challenges traditional human-centred perspectives and recognises matter as active, meaningful, and capable of influencing human experience.

Through her engagement with new materialist theory, Zena Holloway's understanding of her practice has evolved. Her work reflects a shift away from viewing materials as passive resources towards seeing them as collaborators in the creative process. This perspective supports the idea of a symbiotic relationship between humans and the natural environment rather than one based on control or exploitation. As an introductory focus, Holloway's practice provides a strong foundation for discussing how new materialist artists use organic materials to challenge established hierarchies between humans and nature, setting the context for a deeper exploration of her work later in this project.

Finally, I would like to incorporate these ideas and artists into my own thinking and practice. I aim to highlight nature and promote growth as part of my work. In my practice, I am experimenting by combining different materials, such as plants and organisms, with ceramics and other materials. Combining living materials alongside non-living materials.

Chapter 1 - New Materialism.

Over the last four decades, a movement known as new materialism has emerged, bringing together the fields of science, technology and design. This movement emphasises exploring materials not simply as passive substances we manipulate, but as active participants in the creative and ecological process. New materialism promotes a way of thinking that emphasises the importance of collaborating *with* nature rather than attempting to control or dominate it. By recognising materials as dynamic agents, rather than inert resources, this approach fosters a more sustainable, responsive, and ethical relationship between humans and the natural world. (Dolphijn, & van der Tuin, 2012)

One of the core principles behind this movement is the idea of collaboration, specifically, the collaboration between humans and nonhuman materials. This partnership can yield unexpected and innovative results, particularly in the fields of art and design. Rather than forcing materials into predetermined shapes or outcomes, designers instead listen to what the material wants to become. This process often produces outcomes that challenge traditional expectations of design, resulting in

works that evolve organically and demonstrate a kind of shared authorship between human creators and natural methods. (Fox, 2022).

Another significant benefit of this approach is its ability to reveal the profound interconnectedness between all living and non-living systems. As humans engage with materials in new ways, the process encourages reflection on environmental responsibility and the fragility of ecosystems. This connection can help increase awareness of the destructive impact human activity has had on the natural world. Consequently, many designers and scientists working within this movement view their practice as a form of activism using creativity not just to produce objects but also to provoke thought, conversation, and change.

The term *new materialism* has been defined as “a growing cross-disciplinary effort to challenge longstanding assumptions about humans and the non- or other-than-human material world.” (Dolphijn, & van der Tuin, 2012) This definition reflects the growing shift away from anthropocentric thinking, a worldview in which humans are placed at the centre, and everything else exists merely to serve them. New materialism instead recognises that materials, organisms, and environments have agency. That agency may not resemble human decision making, but it still plays a role in shaping outcomes. This reframing helps strengthen the connection between humans and nature by emphasising mutual influence rather than domination.



Fig.1: *Roots*

New Materialism, also known as Neo-materialism, is an interdisciplinary approach that first emerged in the late 1990s and early 2000s through the work of various theorists. Their work encouraged researchers to reconsider the relationships between living and non-living beings, ranging from humans and plants to soil, algae, fungi, and synthetic materials. One of the most influential thinkers in this area, Jane Bennett contributes to this conversation by emphasising the significance of these relationships and the philosophical implications they entail (Allen, 2023).

Jane Bennett introduced the concept of *thing-power*: “the curious ability of inanimate things to animate, to act, to produce effects dramatic and

subtle” (Allen, 2023). Bennett’s writing challenges the notion that creativity and movement are exclusive to conscious beings. Instead, she argues that matter itself is full of potential, constantly influencing and reshaping the world around us. This idea is particularly relevant in creative practices where materials sometimes behave unpredictably, such as when living organisms are used to grow furniture, textiles, or art. Instead of resisting this unpredictability, new materialist practitioners embrace it, seeing it as an essential component of discovery.

Historically, before industrialisation and mass production, many artists and craftspeople were already influenced directly by nature. Natural processes, growth patterns, and biological structures influenced the early development of design, architecture, and storytelling. In many ways, new materialism is not an entirely new idea; it is a return to a forgotten way of relating to the world. However, what makes it distinct today is the scientific knowledge and technological tools that allow us to explore materials at microscopic or even molecular levels. Artists and designers are now working with bacteria, algae, and other living organisms to produce colour, structure, and form. These once invisible collaborators have now become central to material innovation.

The COVID-19 pandemic further intensified interest in new materialism. Many people have become more aware of their reliance on natural systems, such as air, water, microbes, and ecosystems, for survival. At the same time, the pandemic highlighted issues with global supply chains, overproduction, and inefficiency. This encouraged designers and researchers to search for alternatives to plastics, fossil fuel-based materials, and harmful chemicals that damage wildlife and destabilise

environmental systems. As a result, new materialism evolved not only as a creative practice but also as a strategy for ecological repair and resilience.

One highly influential figure in this field, Karen Barad, challenges traditional distinctions between matter and meaning, culture and nature, or the physical and the symbolic. Her work argues that everything in the world exists in constant interaction with one another. Nothing is isolated or independent; instead, everything influences everything else. This perspective supports the idea that materials are active participants in shaping reality, meaning they should be treated with respect and curiosity. (Dolphijn, & van der Tuin, 2012)

In conclusion, new materialism represents a profound shift in our interaction with the world around us. It encourages designers, scientists, and thinkers to develop a deeper appreciation for both living and non-living materials. By allowing materials to guide the creative process and acknowledging their agency, we open the door to more sustainable, ethical, and imaginative futures. Rather than treating nature as a resource, new materialism views it as a collaborator, one that can teach, challenge, and inspire us as we continue to reshape our world and our understanding of what it means to create.

Chapter 2- Dasha Plesen and Ankia Yi

Dasha Plesen is a Russian artist based in Moscow. She is a photographer and a practitioner of new materialism. A significant aspect of her work involves cultivating mould and engaging in a "collaboration with organisms" (Plesen, 2023). Throughout her artistic career, Plesen has

expressed a fascination with the concept of initial "growth." She explores the free nature of these organisms using various methods, such as free seeding, dancing with the dish, shouting at it, exposing it to the air, or speaking different words to influence its controlled growth. This approach allows her to examine matter and organisms in their purest form, creating a rhythmic relationship between herself and the materials she has chosen, specifically mould and fungi.

Drawing inspiration from the mould she cultivates in her petri dishes, Plesen states, "With every experiment, artwork, or project, I see that I am uncovering more and more hidden gems of my id, ego, and superego. This experience brings me enormous power, strength, and inspiration!" (Plesen, 2023). By incorporating human elements such as skin, breath, and other organic matter into her artworks, she fosters a profound connection with the living collections she has grown.

The core concepts of her work revolve around the freedom of bacteria and fungi (Trendland, 2025). Her art embodies the essence of new materialism, emphasising the importance of nature and its diverse, nonhuman agencies. Mould plays a crucial role not only in plant ecosystems but also in human health and environmental regeneration. In this sense, the organisms she cultivates challenge the cultural stigma surrounding decay and microbial life, reframing it as a site of potential, complexity, and interspecies dialogue.

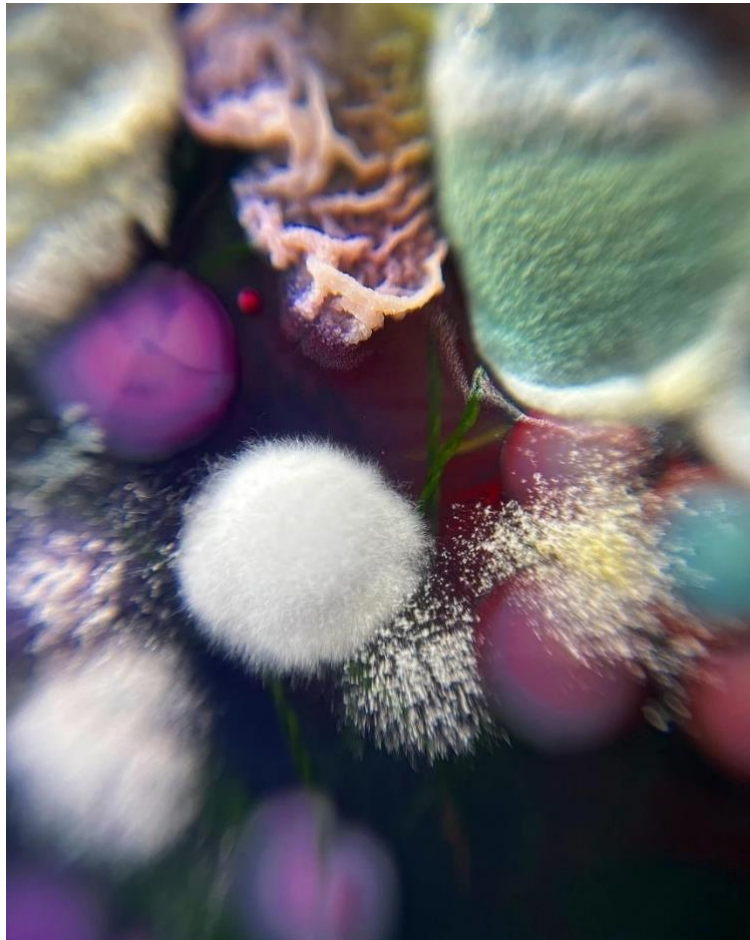


Fig. 2: *Bio art examples*

Plesen has developed an extensive archive of moulds through her microbiological practice. Her initial concept of “growing” is rooted in exploring the free nature of these organisms, allowing for creative interactions with the material rather than strict laboratory control. This collection has been described as a fascinating array of the grotesque,

sublime, and beautiful. Each piece showcases a multitude of shades and gradients, highlighting individuality through layers of experimentation and innovation. This process results in both organic and unpredictable outcomes, embracing the spirit of new materialism.

“Being in such an intimate and strong relationship with the art material sometimes makes you one with your creation” (Plesen, 2025). Working with volatile materials that are difficult to preserve underscores the significance of natural processes that resist ownership or permanence (Plesen, 2023). The works, therefore, operate as living systems rather than static objects.

Radical Mycology, founded by Peter McCoy, is a movement that is part of a broader and diverse "mycoculture," which focuses on cultivating fungi, primarily mushrooms, for various purposes including food, medicine, environmental care, and material innovation. (Sheldrake, 2020) According to Sheldrake (2020), "many organisms have formed radical partnerships with fungi," demonstrating the profound role fungal networks play in planetary survival. These partnerships can aid in healing landscapes and fostering better relationships with nature and each other, aligning closely with the philosophical underpinnings of radical mycology.



Fig.3: *Bio art examples 2*

The movement places emphasis on working with mushrooms to restore ecosystems, protect waterways, promote food security, and support medicinal sovereignty (Wozniack, 2021). Radical mycology challenges the assumption that fungi are dangerous, dirty, or undesirable, instead positioning them as collaborators and teachers within ecological systems.

Another artist who works intimately with mould and bacteria is Anicka Yi. Yi is a New York-based artist originally from South Korea, best known for her multisensory installations that engage the senses of smell, microbial activity, and speculative biological systems. She frequently collaborates with scientists, including microbiologists, synthetic biologists, and olfactory engineers, to bring her conceptual works into physical form. Yi's

practice delves deeply into the tensions between the human and nonhuman, culture and nature, control and contingency. (Yi Studio, 2019)



Fig. 4: *Living and dying in the bacteiacene*

Many of Yi's works from 2016 to 2021 foreground microbial life as both material and metaphor. For example, her piece *You Can Call Me F* (2017), exhibited at the Guggenheim Museum, involved cultivating bacterial colonies based on swabs taken from women of diverse backgrounds. The

resulting living installation challenged cultural fears surrounding contamination, hygiene, and bodily boundaries, while also literally embodying collective identity.

Yi's interest in ecosystems extends into speculative territory. Her 2021 Turbine Hall commission for Tate Modern, *In Love with the World*, introduced autonomous, biological-looking machines she called "aerobes." Floating like jellyfish drones, these forms blurred distinctions between organism and technology, past and future, suggesting alternative modes of evolution. She has described her methodology as "biopolitics meeting biosphere," and one of her most well-known conceptual statements "*Living and dying in the Bacteriaceae*", resonates strongly with theories of new materialism and posthumanism.

Like Plesen, Yi challenges cultural assumptions surrounding decay, dirt, and microbial life. Both artists engage with ecosystems typically classified as "dying" or "unclean," encouraging audiences to reconsider microbial existence not as threatening, but as vital, relational, and aesthetically rich. Their work mirrors themes found in Mary Douglas's *Purity and Danger*, which argues:

"In this final stage of total disintegration, dirt is utterly undifferentiated. Thus, a cycle has been completed... Formlessness is therefore an apt symbol of both beginning and growth as well as decay." (Douglas, 1966)

Using mould and decay as a material that many makers, including myself as a maker/designer, are interested in, acquiring new materials that have not been widely used can help us learn more about the organisms and understand that an organism is not ugly or unclean; it is all natural.

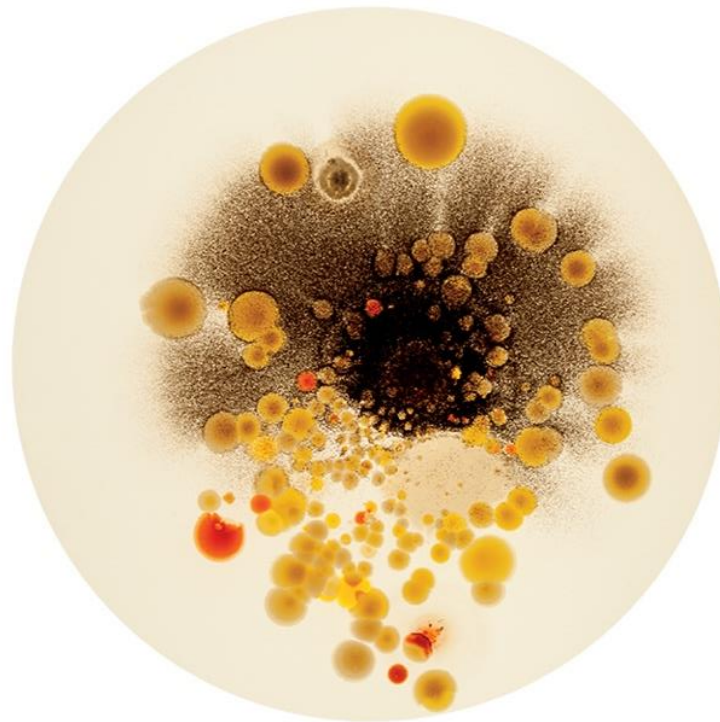


Fig. 5: *Bacteria*

Through their practices, Yi and Plesen highlight that mould, fungi, and bacteria exist beyond binary categorisation. They serve as reminders that all life, including human life, exists within cycles of transformation. Rather than treating decay as failure or threat, their work reframes it as a site of collaboration, potential, and becoming.

This universal, eternal, and inviolable order governs the world and determines all single events: the path of the sun, the moon, and the stars, the growth of plants and animals, and the movement of winds and clouds. All this is maintained and preserved, not by mere physical forces, but by the force of the Good; the ethical meaning has replaced and superseded the magical meaning. (YI, 2015)

Chapter 3 - Zena Holloway

Zena Holloway is a British photographer, bio-designer, and material innovator whose work lies at the intersection of art, nature, and sustainability. She describes her artistic practice as an “intuitive leap into the future to imagine a material world that is grown, not made” (Holloway, 2025). Instead of relying on industrial processes or synthetic materials, Holloway collaborates with natural systems, particularly plant roots, to cultivate sculptural forms. Her work challenges conventional ideas of design, authorship, and material production.

Holloway's practice reflects a broader shift within contemporary art and design towards ecological thinking and regenerative processes. In contrast to extractive and waste-heavy manufacturing methods, her work proposes a future where materials are cultivated slowly, ethically, and in collaboration with living organisms. This approach situates her within the emerging field of bio-design, where designers collaborate with biological systems rather than exerting control over them, letting the organisms

define their own shapes and structures organically. This means that results cannot be always predicted and the outcomes will be unusual and unique thus creating bespoke original pieces that cannot be recreated. (Williams, 2012).



Fig. 6: *Textile roots*

Central to Holloway's work is her use of plant roots as both material and metaphor. Roots are living systems that respond directly to their environment, growing, adapting, and reshaping themselves in response to changes in soil, moisture, and space. Holloway states, “Roots grow down, always changing and adapting to their environment” (Holloway, 2025). This process-led growth mirrors how humans also evolve in response to their surroundings socially, emotionally, and physically. By highlighting roots,

Holloway invites viewers to reconsider their relationship with the natural world and recognise shared patterns of adaptation and resilience.

The sculptural textiles produced by Holloway are not traditionally “crafted” in the human sense; instead, they are grown. Seeds develop dense root systems over time, forming fibrous, lace-like surfaces that resemble textiles, skins, or geological fragments. The resulting forms are both fragile and resilient, organic and structured. These works challenge the assumption that innovation must rely on advanced technology or artificial materials. Holloway demonstrates that intelligence exists within natural systems if designers are willing to listen and observe.



Fig.7roots

This philosophy is clearly represented in the work shown in Fig. 1, where root-grown textile forms are displayed in a minimal, industrial setting. The contrast between the raw concrete wall and the delicate, pale organic structures heighten the tension between the natural and the artificial. The roots appear almost like archaeological artefacts or remnants of a future civilisation, suggesting a speculative vision of what material culture might look like if humanity shifted its priorities towards sustainability and ecological balance.

The visual language of Holloway's work also draws upon themes of impermanence and care. Unlike mass-produced objects designed for durability and uniformity, her root structures are sensitive to time, handling, and environmental conditions. This fragility underscores the importance of being attentive and responsible in achieving sustainable futures. As design theorist Ezio Manzini argues, sustainable design is not only about materials but also about “new ways of living, producing, and caring” (Manzini, 2011). Holloway's work embodies this ethos by requiring patience, observation, and respect for natural growth cycles.

Furthermore, Holloway's background in photography informs the presentation of her work. She carefully documents the growth process and final forms, emphasising texture, scale, and organic detail. This documentation bridges the gap between science and art, allowing audiences to engage with the work even when the living material itself may no longer exist. In this sense, photography becomes both an archive and an extension of the artwork, preserving moments within a constantly changing biological process.

The Craft Council recognises Holloway as an artist whose work “challenges our understanding of materials and making”(Crafts Council,2023). By removing the designer’s hand from the final form, she questions traditional notions of authorship and control. The plant becomes a collaborator rather than merely a resource, aligning her practice with post-humanist thinking that decentralises the human and acknowledges the agency of non-human life. (Holloway, 2025)

This collaborative approach is particularly relevant in the context of the climate crisis. As environmental degradation accelerates, artists and designers are increasingly tasked with imagining alternative futures. Holloway's work does not offer a technological fix; instead, it suggests a philosophical shift that values slowness, interdependence, and humility. Her practice indicates that sustainable futures may emerge not from dominating nature but from learning to coexist with it.

Links to my practice

In my future work, I plan to apply this new material theory by incorporating living plants into my pieces. I have a strong interest in working with moulds and fungi, and collaborating with these organisms will deepen my understanding of their significance. I want viewers of my work to recognise the importance of these remarkable living entities. By positioning plants and fungi as active participants rather than passive materials, I aim to challenge traditional hierarchies between human creators and the natural world. This approach allows my practice to move beyond static objects

toward works that evolve over time, shaped by environmental conditions and biological processes.

Fungi fascinate me due to their resilience, adaptability, and essential roles within ecosystems. Often overlooked or associated with decay, fungi are vital agents of renewal, breaking down waste and redistributing nutrients. By integrating them into my work, I seek to question negative perceptions and highlight their intelligence and quiet productivity. Collaborating with living organisms also introduces an element of unpredictability, requiring me to relinquish some control as an artist. This shift aligns with my interest in sustainable and ethical making, where outcomes are shaped through cooperation rather than domination.

In the past, I envisioned creating a ceramic vessel with fungi growing both inside and outside of it. This would serve as an innovative way to address issues of food and waste, as the fungi would consume and thrive on discarded materials. In this way, I aim to marry aesthetics with practicality in my art while promoting sustainable practices. Building on this idea, I envision vessels functioning as small ecosystems that can respond to their surroundings and adapt over time. These works would exist somewhere between sculpture, tool, and living system, inviting viewers to reconsider how objects might function within a more circular model of consumption.

Through these projects, I aim to foster slower, more mindful modes of engagement. Living materials demand care, observation, and

responsibility, fostering a deeper relationship between the viewer and the artwork. Rather than being preserved behind glass, my pieces would require interaction and maintenance, emphasising themes of interdependence and stewardship. Ultimately, my future practice aims to create works that not only communicate ideas about sustainability and coexistence but also actively embody these principles through their material presence and ongoing transformation.

Conclusion

In conclusion, the exploration of new materialism has profoundly influenced my understanding of art, materials, and the creative process. Engaging with new materials has revealed a myriad of possibilities, enabling me to experiment with enthusiasm and pursue more radical and unconventional outcomes. New materialism presents a contemporary and dynamic vision of art that reestablishes the partnership between art and nature, rather than prioritising humanity. Within this framework, materials are regarded as active participants rather than passive objects, prompting a deeper examination, questioning, and comprehension of the structure and behaviour of the materials employed.

This inquiry has significantly shaped my practice, particularly through the concepts of controlled growth and manipulation. Facilitating the growth of materials while simultaneously directing that growth has become a central aspect of my methodology. I perceive a more profound connection with my work, as I am intricately linked to both the materials and the outcomes that result. My interest in mycology has notably intensified during this project,

and I aspire to further investigate this area, as it strongly resonates with themes of growth, decay, and collaboration with living systems.

The artists I have studied have been instrumental in shaping these ideas. Anicka Yi's examination of decay, the unconventional, and the beauty inherent in what is often considered repulsive has challenged my perceptions and encouraged a revaluation of materials typically dismissed. Similarly, Zena Holloway's work has inspired a contemplation of how natural materials can be transformed, combined, and even worn, thereby blurring the distinctions between the body, nature, and art.

Overall, this project has reinforced my commitment to new materialism and nature-based practices. It has endowed me with a renewed perspective on art, one that is experimental, respectful of natural processes, and grounded in curiosity, collaboration, and growth.

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