

Senses and Masks in Design: Unveiling Experience

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Abstract

Design embraces the challenge of addressing complex issues through multidimensional and pluralistic approaches. It continuously absorbs and reinterprets concepts, tools, and methodologies, transforming them into concrete solutions and frameworks of understanding. The author started to use design and masks in December 2023: traditionally associated with theatre, transformation and communication, masks become a medium for exploring new forms of teaching and participatory practice in design. Far from being mere expressive artefacts, they act as plural design devices that shift perspectives, inspire creative and lateral thinking, promote interaction among individuals, groups, and environments. Employed in sensory-educational design contexts, masks serve as catalysts for redefining approaches, engaging with personal and collective identities, and supporting change, connection, and co-creation. Design can broaden its scope and potential by engaging with new questions and practices informed by the knowledge and traditions associated with masks. Pilot projects and hands-on exercises in mask design and fabrication demonstrate how the fundamental principles of design can serve as a means to renegotiate, invent, revitalize personas, spaces, atmospheres, communities and design teaching itself.

The paper examines cases in which masks, when employed in educational and participatory contexts, operate as design instruments that promote creativity, new narrative, critical inquiry, and active participation.

Keywords

Interdisciplinary
Participative design
Sensory design
Social innovation
Basic design

Premises and Context – Masks and Design

Design is a composite field of knowledge that offers meta-knowledge: it applies and reinterprets existing information, renegotiates knowledge to generate new solutions, and integrates creativity with rigor. The increasingly blurred boundaries between disciplines demand a multifaceted approach, at times even transgressive or 'undisciplined' (Mitchell, 1995), that encourages new connections, incorporating sensory design and creative and performative approaches in both teaching and participatory practices (Kuhtz & Tizi, 2023; Kuhtz, 2022). The design project assumes the strategic role of managing complexity, focusing on refining processes and instrumental mechanisms. Design thinking, systems thinking, creativity and prototyping, co-design, and problem-solving become the toolkit that integrates disciplines and knowledge systems. In this context, sensory design learning and participation methods, which involve the coordination of visual, auditory, kinesthetic, and tactile inputs, offer effective results in consolidating design knowledge (Shams & Seitz, 2008).

Sensoriality and performativity, which influence both expression and cognitive recognition, lead to the creation of complete, plural, innovative, embodied, and person-centered products/services/processes (Manzini, 2015). The value of sensory input lies not only in developing students' sensory capacities, but also in giving them the ability to follow a logical path of synesthetic translation and apply it to projects (Riccò et al., 2003). Workshops exploring sensoriality have been developed as integral components of basic design education (Kuhtz, 2024). The growing demand for sensory and synesthetic training in design has also created opportunities for the use of virtual technologies, which can orchestrate diverse sensory stimuli and simulate complex scenes (Liu et al., 2018).

The boundary between technique and creativity, between scientific knowledge and narrative knowledge, also blurs the boundary between objective and subjective knowledge. Everything that is created

in the scientist's laboratory playing with science, as well as in the children's laboratory playing with art, is a story that finds its legitimacy in the very act of its realization and in finding a group of people ready to listen and re-tell it to others. (Munari, 1991).

This epistemological openness invites design to embrace not only new tools and media, but also new ways of communicating. In this sense, the performative dimension of design becomes central: it is not simply a matter of solving problems, but of staging them, embodying them, and enacting new configurations of meanings and narratives. Body, emotions, and imagination become legitimate and powerful instruments of knowledge. In doing so, the design process becomes a space of experimentation in which ambiguity, uncertainty, and contradiction are essential components of learning and innovation. Moreover, in user-centred design, it is important to be creative and explore the world of the users.

In this paper, masks become learning strategies in basic design education and relational tools in social innovation processes.

Masks have a long history in human cultures. They are used in rituals, performances, and social practices to represent multiple identities, to protect, conceal, or unveil identities (Sisto & Totaro, 2016). In contemporary design, masks can become tools for exploring sensoriality, perception, and interaction, opening new possibilities for teaching, participation, and design.

At the same time, it is worth recalling that puppets and masks were part of the Bauhaus's exploration of art, form, and creativity, most notably through Oskar Schlemmer's theatre workshop and the influence of Johannes Itten's emphasis on play. Artists such as Paul Klee, Alma Siedhoff-Buscher and Gertrud Arndt created puppets and masks, which often reflected Bauhaus principles of geometry, functional design, and a return to a childlike imagination for pedagogical and theatrical purposes. These creations were not just toys but instruments for performance and a means to break from academic tradition.

In his basic design class, Topaloglu (2015) asks students to translate architectural concepts, figures or movements into short, body-based performances, using theatrical and collaborative exercises to teach fundamental design principles. Roy (2020) underscores that the fabrication and use of masks in the classroom increase engagement and inclusion, develop empathy and perspective-taking: adopting a new persona through a mask encourages students to inhabit other viewpoints and narratives.

Luke (2023) describes how *the Mask Project* at the Williamsburg High School for Architecture and Design in New York can function as a powerful pedagogical tool: fabricating masks reinforces fundamentals, teaches iterative design and material skills, and at the same time opens a space for narrative, identity and social engagement.

When actors prepare a piece, they first study the psychological, emotional, and physical traits of the character they interpret, to understand personality and distinctive characteristics. They then work on themselves, physically as well, to bring the character credibly to life on stage. Similarly, we can assume that designers, employing personification methods, can thoroughly study the potential recipients of their projects, characterize their profiles, and, through identification and interpretation, better understand their needs, motivations, and pains, literally putting themselves in their shoes (see Ciravegna, 2021; Halvorsrud et al., 2016).

Through this interpretative process, the act of design approaches that of drama-turgy: a conscious construction of roles, situations, and narratives that aim not only to respond to functional requirements, but to shape experiences and behaviours. Masks, in this context, are not only objects or metaphors, they are dynamic devices for transformation. They allow designers to explore alternative identities, simulate interactions, and challenge assumptions embedded in systems and services. By activating embodied cognition and dramatization, masks make it possible to access a deeper level of empathy and insight, especially in user-centered design practices. Masks embody the outward signal of an intense inner life.

The integration of theatrical and ritual elements into design education and practice fosters a deeper awareness of the performative dimension of human interaction. The mask becomes a medium through which participants can explore multiplicity, test hypotheses in action, and construct shared meanings. In this expanded framework, the design process transcends the role of a technical or aesthetic exercise and becomes a form of cultural production, capable of generating new rituals, reshaping identities, and reconfiguring the relationships between individuals, communities, and environments. In this article, pilot experiences of mask design and fabrication in classroom and in participation workshops, favour the application of the basic principles of design. Moreover, through these artefacts it is also possible to renegotiate, invent, and regenerate personas, places and atmospheres.

Masks as Devices of Plural Design: Unveiling Transformation

Central to this project is the provocative use of masks, re-imagined not as mere theatrical or cultural artefacts, but as potent devices of plural design. This re-conceptualization transforms the mask into a dynamic tool for stimulating perception, creativity, and intersubjective engagement. Their symbolic power, rooted in millennia of human culture as instruments of transformation and communication, serves to unlock new possibilities in design education and practice. Cultures from every continent and latitude employ masked disguises (Kéreny, 1976). The theatrical ritual is one of the many activities that ancient peoples practiced in masks. Mask and disguise offer the possibility of assuming features borrowed from the animal and plant world. On one hand, a caricature of human anatomy; on the other, an integration of virtues and sensitivities: the tenacity of ivy, the vision of a hawk, the fierceness of an eagle, the strength of a bison, the prolificacy of a hen, the agility of a cat. Horns, beaks, feathers, large noses, and large eyes. Many masks are made with animal-derived materials, from leather to beeswax (Mazzoni, 2005).

On stage, their 'character' drives each mask of the *Commedia dell'Arte*: a complex of propensities, values, weaknesses, which signals a certain similarity with the agents moving in computer simulation models first introduced in social psychology and then employed in "agent-based" simulations, as well as in artificial intelligence (Gilbert & Doran, 1994). From an anthropological point of view, theatre and comedy can be interpreted as the objective need to ritualize social, economic, and political conflicts; in Design, masks become a possibility to study possible scenarios and empathize with user groups (personas). The hero of the masked farce tends to force certain limits imposed by society. The poor servant manages to satisfy hunger at the rich merchants' table; women destined for forced marriages manage to fulfil their dreams of love; bullies flee in fear, overcome by the cunning of subordinates. Choosing the mask as an artefact for hands-on construction, which future designers are called upon to create, is not like choosing to make a table (though also important), because it also poses additional questions in the toolkit of the future professional.

In literature, ethno-anthropology, storytelling, and theatre reinforce the person-oriented approach of design (Burgoyne, 2018). The author proposes an intersection of knowledge that focuses attention on senses and masks, supports the person-oriented approach; engages with a multiplicity of expressive languages; stimulates dialogue between aesthetics, techniques, and meanings; fosters a co-design process, allowing for a different understanding of UX (the user experience). The intent is to strengthen design as a collective practice, allowing for the exploration of the ethical and political implications of contemporary design, where diversity and cultural identity become key elements of innovation. Thus, masks are not merely aesthetic artefacts or performative tools but become devices for redefining public space and participatory processes. Their design is therefore not only an exercise in form and function, but also an act of constructing shared meanings, capable of stimulating new connections between disciplines, communities, and territories. Participants in fact design and create masks inspired by

a specific character chosen ahead of time, then wear them and bring them to life, as described in detail in the next paragraph.

Masks modify the perception of perspectives, stimulate creativity and lateral thinking, and foster interaction between individuals, groups, and the environment. This multi-faceted impact is crucial for nurturing the kind of designers that can navigate complex contemporary challenges. By enabling users to momentarily inhabit a different persona or perspective, masks can disrupt ingrained cognitive patterns, encouraging participants to embody another persona. This embodied empathy is a cornerstone of human-centered design, allowing designers to move beyond abstract data points to a deeper understanding of user needs, motivations, and pains.

Lateral thinking, as introduced by Edward de Bono, emphasizes solving problems through an indirect and creative approach, using reasoning that is not immediately obvious. Masks, by offering an external representation of an internal shift, can act as catalysts for this type of thinking. When one wears a mask, the usual self-consciousness or preconceived notions about one's identity can recede for a while, opening up mental space for unconventional ideas and associations. This performative aspect encourages playful experimentation, a critical ingredient for innovation.

In group settings, masks can lower inhibitions, facilitate role-playing, create a safe space for exploring sensitive topics or challenging power dynamics without direct personal confrontation. This playful distance can enable more honest and open communication, fostering genuine collaboration and a new narrative. Furthermore, by acting as tangible manifestations of abstract concepts — whether an emotion, a societal role, or a desired future state — masks can become shared artefacts around which dialogue and co-creation can coalesce. They offer a common language that transcends verbal articulation, particularly valuable in diverse or multicultural groups where linguistic barriers might exist. They unveil experience.

Moreover, character design has become an emerging field not only in visual communication but also in engineering, robotics and mechatronics, often using the face as

a fundamental interface with the user. As humans, we are neurologically primed to read, remember and respond to faces. At a time when faces and humanoid characters are proliferating across disciplines, often treated uncritically as mere interfaces, the idea of using mask fabrication in basic design reclaims the face as a conscious site of design inquiry, drawing on both cultural history and cognitive science to teach students how form, perception and meaning intertwine.

Pilot Cases: Masks and Sensoriality

Teaching

Basic design continues to evolve by integrating innovative, hands-on learning models in which students engage with materials and spatial exploration before theory, into traditional teaching methods (Caner Yuksel & Dinc Uyaroglu, 2021; Wang 2025). The course conducted by the author at the Università di Firenze expands basic design education through parallel tracks combining foundational topics (color, form, pattern) with non-traditional experiences such as sensoriality, perception, body measurement, and the study of masks and personas. This approach emphasizes the dynamic relationship between masks and design, grounded in the essential role of sensoriality in shaping design understanding (Kuhtz, 2024).

The dialogue that leads to mask design begins in class with an exploration of the meanings that masks have held across human cultures, asking what they can still teach us today and what characters they can reveal. Starting from the faces of Munari's *Look into my eyes* and viewing masks from different cultures, the 'face' exercise becomes a procedural and interactive design problem Fig. 1.

Masks across cultures function as simplified representations of social identities — like UX personas — offering a layered metaphor that helps individuals understand and consciously shape their roles, while inspiring students to explore, design, and embody their own persona through creative mask

making. In these lectures we had the privilege to touch and wear the original masks created by the actor and artist Giancarlo Santelli (1944-2020), and with the help of his nephew, to penetrate their meanings and fabrication techniques.

On a practical level there are different phases Fig. 2-5.

This assignment allows first-year students to practice basic design principles (form, colour, rhythm, balance, contrast) while also learning about the mask as a cultural and performative object. It also manifests how the body that wears the mask and moves with it produces a new space and a new identity, making the design exercise both analytical and experiential.

Such projects can spill over into public-art or participatory design activities, as described in the next paragraph.

City - Participation

The field of participatory design can draw sustained inspiration from theatrical practice. Within this framework, the simple act of fabricating and wearing a mask transforms the atmosphere of a place, suspending ordinary roles and opening a space for imagination and negotiation. This is the point of experiments with mask-making workshops carried out by the author in schools located in peripheral areas of Italian cities, using the mask as both a tool of aggregation and a medium for envisioning a different, multicultural future.

In one such neighborhood (in Bari, in Southern Italy), in a space offered by a parish, workshops have also been held with an artist-sculptor, involving children ages five to nine, some of their parents, and immigrant adults residing in the local Reception Centre for Asylum Seekers (C.A.R.A.) Fig. 6-7.

The project expands beyond a local Carnival event by using mask-making as a participatory, sensory, and socially innovative design practice that fosters empathy, shared storytelling, and new possibilities for marginalized communities.

Mask-making can also be framed explicitly as a form of public art.

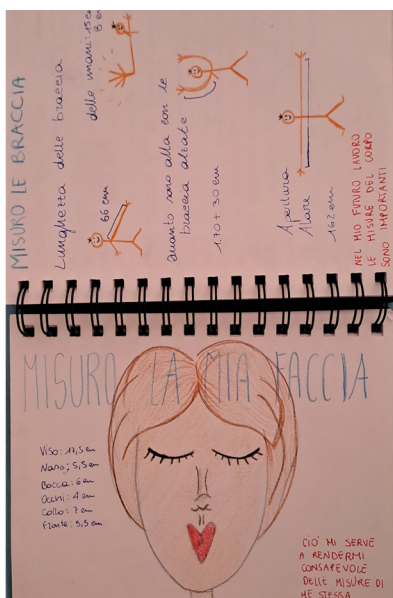


Fig. 1
Students measure their faces, limbs and bodies and draw a table of measurements. They are learning to identify a set of rules: varying eyes, mouths and outlines. Mask making moves beyond craft and performance into parametric, procedural and interactive exploration.

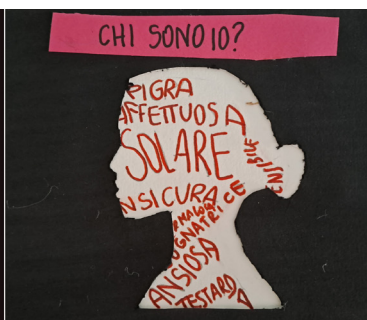
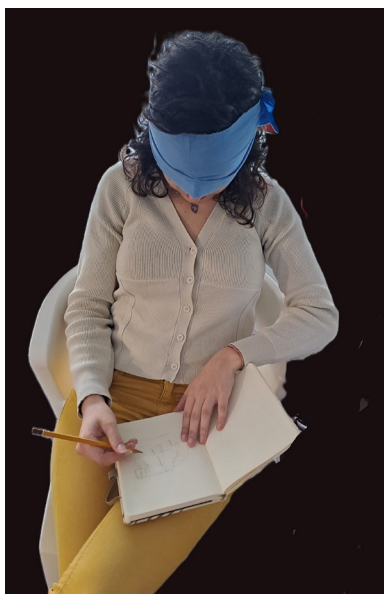


Fig. 2
Drawing blindfolded. Experiences with real Masks. Questions on personas.

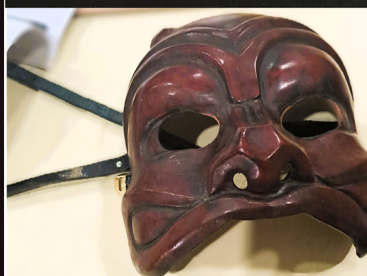


Fig. 3
Draw a face without looking at the paper.

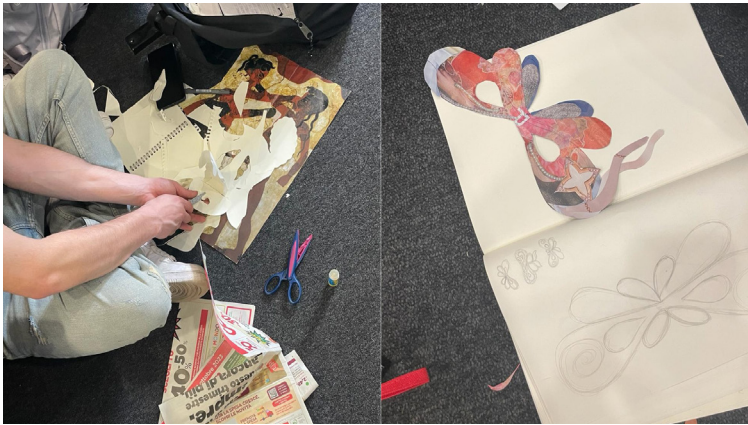


Fig. 4
Design and construction: use all the outputs to generate multiple design hypotheses (graphic and mask design); the main materials used are paper, newspapers, cardboard, glue, subsequent painting, and finishing.



Fig. 5
Students wear the mask they fabricated. Wearing a mask, a disguise, can give vent to the fertile restlessness that presses beneath the surface of our outer image, suggesting a rethinking of individual priorities and relationships with others (but also of the relationship we have cultivated with our talent, with our history, with our aspirations). Design and theatre are body disciplines.



Fig. 6
The artist-sculptor with one participant.



Fig. 7
Kids wear the masks they are fabricating.



Fig. 8
The parade with masks
and Carnival installations
realized in the workshop.

Conclusions

This paper investigates how masks used in teaching and participatory contexts become design devices capable of stimulating creativity, storytelling, critical reflection, and active participation. The interdisciplinary approach it adopts fosters integration between different disciplines: basic design, history, theater, technology, and co-design practices.

The paper draws a parallel between actors embodying characters and designers employing personification methods to study the potential recipients of their projects, characterize their profiles and, through identification and interpretation, better understand their needs, motivations and pains, e.g., putting themselves in their shoes. This embodied empathy, facilitated by the act of wearing a persona (metaphorically or literally with a mask), allows designers to move beyond abstract data points to a deeper, visceral understanding of user experiences. It shifts the design process from a detached, analytical exercise to a more immersive, experiential one, fostering genuine compassion and insight. In different cultures, the use of stock characters in masks, each with a fixed “character” conveyed through their expression, gestures, and regional stereotypes, provides a historical precedent for the use of archetypes to understand social dynamics. The interaction between these masked characters, representing the negotiation of instances, impulses, needs, desires, mirrors the complex interplay of stakeholders and user needs in a design project. By embodying these personas, designers can gain a comprehensive understanding of the needs and demands of UX personas, simulating their behaviors, exploring potential conflicts, and identifying opportunities for intervention. Thus in basic design courses, masks become a means to apply basic design principles, study possible scenarios and empathise with different user groups (personas). This suggests using masks not just for individual empathy exercises but for

When workshops, as in this case, are held in semi-open or outdoor spaces and culminate in parades, performances or installations, the masks become not only individual artefacts but collective, site-specific interventions **Fig. 8**.

This public dimension allows communities to co-design and co-produce visible signs of their presence in the city, to occupy and temporarily transform common spaces, and to experiment with new rituals of belonging. In this sense, the making and wearing of masks functions as a participatory, sensory and performative practice of public art: it generates aesthetic experiences and social bonds, reconfigures how urban spaces are perceived and used, and offers marginalized groups a platform for expression and recognition.

This paragraph describes one part of a multifaceted project entitled *Stàmina-Stories*. The project focuses on the storytelling of places that are both sorrowful and wonderful at the same time, as a metaphor for atmospheres and territories marked by contrasts, by the fragility and solidity of traditions and yet by new possibilities. The aim is to develop an innovative and replicable narrative prototype, incorporating workshops such as these, that can engage the senses and the imagination, activate local communities and tell new stories.

collective scenario planning, where different stakeholders can take on roles and act out potential futures, revealing hidden tensions, opportunities, and shared aspirations.

The paper also highlights the ethical and political implications of this approach. By engaging with masks, designers can promote a critical observation of roles and power relationships. Design, with masks and their collective making, can become a tool for redefining public space and participatory processes, moving beyond mere aesthetic form to become an act of constructing shared meanings, capable of stimulating new connections between disciplines, communities, and territories. This positions

design as a transformative practice that can contribute to a more inclusive, equitable, and culturally diverse society.

The idea of intertwining masks and design opens to experimentation in the field and questions how masks trigger a narrative beyond stereotypes, thus becoming a powerful means to redefine the boundaries of the self and rethink the most fragile areas, stimulating new behaviours and shared visions. By involving groups and local communities, expressive practices become the spark for a participatory narrative process capable of redefining the territory; it acts as an agent of change, exploration, and re-appropriation, revealing latent potentials.

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