

The Metaverse and Its Double: Expanded Reality and Theatre via a neurocultural perspective

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Introduction

In recent years, the discourse surrounding Expanded Reality (XR) – a term encompassing virtual, augmented, and mixed realities – has been dominated by its affiliation with the genealogy of visual media, from photography and cinema to digital screens and networked interactivity. However, as immersive technologies increasingly engage bodies, spaces, and gestures, they demand a conceptual framework that moves beyond screen-based visuality. This article proposes an alternative lineage: that of theatre and performance – starting to adopt a neurocultural approach to trace XR’s deeper affiliation with performative, embodied, and ritualistic practices that characterize the theatre. The aim is to explore the almost unexplored relationship between Expanded Reality (XR) technologies and theatrical performance, situating both within a mediological framework that underlines the centrality of the human body in cultural and technological processes, and to propose an original dialogue between Media and Performance Studies.

Drawing on Havelock’s approach via Derrick de Kerckhove’s media theory and neurocultural perspective, the starting point of this theoretical proposal is to reconsider theatre not simply as an art form, but as an early model of cognitive information processing. In this sense, apparently, the concept of *théâtron* seems to fit on the common idea of it as ancestor of a whole series of contemporary visual media, XR included. This approach calls for a media archaeology that does not simply excavate technological precedents but also reconsiders how older cultural forms – like the Greek *théâtron* – configured spectatorship, memory, and social cognition. The theatre, as Deriu (2013) suggests, can be understood as the first great medium, a proto-interface that organizes human perception and collective experience.

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Anyway, later considering Fischer Lichte's *The Transformative Power of Performance: A New Aesthetics*, a change of perspective will arise, looking at the whole body and person who attends a show as an involved component of it, via an active spectatorship. This theory, usually referable to the avantgarde and post-avantgarde performing arts, seems to be suitable to the performing arts in general. Starting from this point, shifting to consider XR, it could be interesting to analyze it through similar and opposite lens: the ones which consider it as a not-only visual medium, enriched by a higher embodied engagement. XR, viewed through this lens, is less an extension of visual media and more a continuation of performative traditions recalibrated through a postdigital sensorium. To support this analysis, the notion of «arche-screen» by Carbone (2019) and «dividual» by Carbone and Lingua (2023) will be central, flanked by the proposition of emphatic (Gallese and Guerra 2015) and gestural screen (Grespi 2019). The idea is to propose XR as a 'quasi-theatre,' clarified by wider interpretations of what screen and theatre are, as the ones produced by Streuven (2021) and Artaud (2000).

By reframing performing arts as active bodily engagement media and XR as a performative, rather than solely visual, medium, this article investigates how technological memory systems and embodied social experiences interact to generate new hybrid forms of cognition, perception, and meaning-making, a particular trait of human evolution which always interconnects social rituals and technology development, in the past as in the present.

Is theatre (just) a medium? Theatre as a mediological model

In his historical-philological work *The Muse Learns to Write: Reflections on Orality and Literacy from Antiquity to the Present* (1986), Eric Alfred Havelock explores the profound cognitive and cultural transformations precipitated by the advent of alphabetic literacy in ancient Greece. He grounds this position in a meticulous analysis of Greek language, poetics, and inscription practices, arguing that the invention of the Greek alphabet was not merely a technical innovation, but a psychocultural revolution: the shift from an oral to a literate culture represents a fundamental reorganization of thought, language, and memory. At the heart of Havelock's thesis there is the claim that oral societies encode knowledge through formulaic, poetic speech, which allows for the transmission of tradition via rhythm, meter, and repetition. In such contexts, poetry is not simply aesthetic expression but a repository of social memory and moral instruction. This is exempli-

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fied in the figure of the Homeric bard, whose performances serve as collective cultural encyclopedias. The ‘muse,’ in this sense, is a metaphor for the embodied memory techniques of oral culture. With the development of phonetic writing, particularly the Greek alphabet with its unprecedented capacity to fully represent speech sounds (including vowels), knowledge becomes externalized, stored in texts, and subject to analysis and critique. Havelock argues that this technological shift inaugurated a new kind of cognition: abstract, analytical, and reflexive. The alphabet not only changed how people communicated but also altered their inner experience, fostering the development of individual introspection and systematic reasoning – traits that would later underpin Greek philosophy, historiography, and science. The ‘muse,’ in this sense, ‘learns to write’ by transforming from a vehicle of oral performance into a symbol of intellectualized, textualized knowledge through a replacement of mythopoetic knowledge with literate, conceptual thought. Starting from Havelock thesis and alongside McLuhan definition of medium, Derrick de Kerckhove proposes a thesis that Greek theatre, far from being a secondary cultural form, was an active response to the psychological upheaval introduced by the phonetic alphabet. Theatre, he argues, was «an exteriorization of memory techniques previously used by the oral tradition», and thus acted as «a model of information-processing» for societies undergoing the transition from orality to literacy (de Kerckhove 1982, 145). In this sense, the theatre functioned analogously to McLuhan’s notion of media as ‘social extensions of man’ – referred, not by chance, to games in *Understanding Media* – by offering not merely a spectacle but a perceptual and cognitive framework capable of integrating the fragmenting effects of writing in a subjective development of thinking. The question of whether theatre qualifies as a medium in the McLuhanian sense has long lingered on the periphery of media theory. While traditional understandings emphasize media as technical extensions of human faculties in non-human materials, theatre – anchored in living bodies and human interaction – resists straightforward classification. Yet, when reframed through the lenses of mediology and neurocultural theory, as proposed by de Kerckhove and interpreted by Fabrizio Deriu, theatre emerges as a key dispositive in the development of Western consciousness and cognition.

Deriu, expanding on McLuhan’s silence regarding theatre in *Understanding Media*, argues that this absence may be less an oversight and more a conceptual impasse. According to McLuhan’s strict criteria, a medium is «an extension of a human function in a material different from the body itself», such as the wheel extending the foot or clothing extending

the skin. Theatre, by contrast, utilizes human beings as both transmitter and receiver within the same material substrate – the living body (Deriu 2015, 62). Thus, it resists easy categorization as a medium unless one reframes the term beyond its purely technological connotations. Yet Deriu acknowledges that de Kerckhove provides a compelling mediological bridge. Theatre, in his view, serves as «the social form of alphabetic psychology» – a stage upon which the shift from tribal collectivity to individual interiority is played out. He summarizes de Kerckhove’s view as recognizing an «intrinsic correlation between the affirmation of alphabetic psychology and the development of theatre in fifth-century BCE Greece» (Deriu 2015, 63). Indeed, the stage, by organizing bodies and utterances in a fixed visual space, enacts the same cognitive distancing that the alphabet imposes upon language – turning sound into sight, continuity into segmentation, participation into observation. De Kerckhove articulates this transformation by contrasting the participatory, rhythmic, and gestural qualities of oral performance – embodied in the tribal chorus – with the reflective and isolating position of the theatrical spectator. The *théatron*, literally ‘the place for seeing,’ immobilizes the body and prioritizes visual processing: «the stage presents a synthesis of one’s visual field; it is an extension or projection of the eye» (de Kerckhove 1982, 146). This displacement of the body’s multisensory engagement into a fixed, centralized visual regime parallels the movement from communal memory to individualized cognition. Furthermore, de Kerckhove positions theatre as a foundational apparatus in the history of Western imagination. The stage, as both spatial organizer and cognitive interface, enabled the formation of mental constructs such as Cartesian space, private subjectivity, and narrative identity. «The stage was, in effect, a sort of prototype of imagination, a try-out space for new experiences, emotions, attitudes, and reflections» (de Kerckhove 1982, 149). This mediological operation, whereby theatre performs and installs new epistemic and perceptual regimes, suggests its inclusion – albeit with qualifications – within the category of media. Here, Deriu finds a resolution to the apparent contradiction in McLuhan’s taxonomy. If games, which McLuhan defines as ‘extensions of group awareness,’ can be considered media despite not being material extensions of the body, then theatre – as both a mimetic ritual and cognitive technology – can likewise be approached as a ‘medium of transformation’ rather than a simple tool. Theatre, in this light, is a primary site of mediated consciousness: it does not extend the body into non-organic material but reprograms the body’s relationship to knowledge, time, and space through performance as social extension of human being. De Kerckhove and Deriu, in tandem, shift the

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focus of media theory from material technologies to symbolic infrastructures. Theatre, when examined through this shared mediological lens, is not a residual artform but a pivotal site of transition: from orality to literacy, from communal embodiment to reflective subjectivity, from action to representation. In this expanded conception, theatre apparently demands its place in the history of media.

Although we just have tried to demonstrate the importance of considering theatre as a medium, perhaps starting from this assumption to broaden the gaze might make more sense. In *The Transformative Power of Performance: A New Aesthetics* (2008), Erika Fischer-Lichte develops a rigorous theoretical framework to understand live performance not merely as a representational art form but as an autopoietic event that generates real transformations in both performers and spectators. Central to her thesis is the concept of performativity, which she distinguishes from representation, arguing that theatre should not be seen as transmitting fixed meanings from performers to audience, but as an emergent process in which meaning is co-created and perpetually renegotiated through embodied interaction. A key mechanism in this process is what she defines as the 'feedback loop' between performer and spectator, which constitutes the performative event as a self-referential and self-organizing system. This loop, dependent on the co-presence of actors and audience in a shared time-space, produces an experience that cannot be reproduced or stabilized through traditional aesthetic categories. The body – both seen and seeing – becomes the primary site of aesthetic and affective engagement. For Fischer-Lichte, performance induces a reconfiguration of perception, disrupting habitual semiotic regimes and opening participants to unexpected corporeal and emotional shifts. Specifically, Fischer-Lichte underscores the liminality of performance, borrowing from Victor Turner's anthropological theory of ritual. Performance becomes a space of transformation, not just of characters or narratives, but of sociality *and* of subjectivity itself. The spectator is not merely a recipient of meaning but is potentially altered through his/her immersion in the event. This transformation is not predetermined but arises from the dynamics of the performance itself, which resists closure and authority. In this sense, it could be problematic, even considering past theatre, to read it as a shift from a collective to an individual artistic experience. Surely subjectivity and individual consciousness are implemented by the spectatorship experience. However, as it is an effect of a meeting loop, the discovering of individuality does not remove in fact it increases the social consciousness: the self as a part of a multitude of other selves. In this sense, Fischer-Lichte proposes her theory as a performative

aesthetics that rejects the Cartesian separation of mind and body, privileging presence, contingency, and embodied affect. In doing so, she positions performance as a uniquely powerful mode of socio-cultural and at the same time individual transformation – one that exceeds representation to engage participants (performers and audience) in a dynamic, embodied negotiation of meaning, identity, and experience.

XR as a reconfiguration of embodied experience

The emergence of immersive media environments, collectively referred to as Extended Reality (XR) – including Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR) – has stimulated new taxonomic approaches within media theory. Among the most articulated Italian contributions to this field is that of Ruggero Eugeni, who frames XR within a broader “neurocognitive ecology,” conceptualizing immersive environments as not merely technological apparatuses but as cognitive architectures that modulate perception, attention, and meaning-making. His perspective, grounded in semiotics, cognitive science, and again mediology, offers a robust analytical framework for understanding how XR reconfigures the interplay between subjectivity and media environments (Eugeni 2012). Eugeni’s theoretical articulation is situated within what he terms “the *postmedial condition*” – a state in which the boundaries between media forms, technological systems, and cultural practices are increasingly fluid and hybridized (Eugeni 2015). In this context, XR environments are no longer perceived as external interfaces but as immersive, sensorially rich spaces in which users are embedded participants. According to Eugeni, the classification of XR experiences should be approached through the interdependence of perceptual immersion, user agency, and narrative engagement.

A first axis of differentiation in the classification of this technologies lies in the degree of sensory immersion and spatial substitution enabled by the medium. Augmented Reality (AR) technologies retain the user’s anchorage in the physical world while superimposing digital content, creating a perceptual surplus that enriches rather than displaces reality. Mixed Reality (MR) environments deepen this interactivity by enabling dynamic interaction between real and virtual elements, effectively producing hybrid ontological spaces. In contrast, Virtual Reality (VR) constitutes a complete substitution of the physical environment, in which the user is immersed in a synthetic world and visual detached from the real. To further distinguish the semiotic operations of XR, Eugeni

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applies a typology grounded in semiotic regimes. Mimetic regimes refer to environments that simulate perceptual reality with high fidelity, often reproducing spatial and sensory realism. Poietic or expressive regimes, by contrast, emphasize aesthetic construction over imitation, privileging metaphor, stylization, and abstraction. Performative regimes, finally, are characterized by the user's active participation in the generation of meaning, making interaction and co-creation central to the media experience (Eugeni 2014). These regimes align with broader shifts in contemporary media, where, in an incredibly similar situation of the performativity previously considered, the spectator is no longer a passive receiver, but an embodied agent embedded in a feedback loop with the medium. In addition to these dimensions, Eugeni proposes three interrelated axes for understanding XR's experiential structures: spatial anchoring, actional engagement, and narrative involvement (Eugeni 2012). Spatial anchoring concerns the extent to which users remain grounded in the real world or are fully immersed in virtual space. Actional engagement refers to the level of user agency – ranging from passive observation to active manipulation of the environment. Narrative involvement addresses the degree to which the user is embedded in a story-world or cognitive framework that demands interpretative participation. These dimensions underscore Eugeni's commitment to understanding XR as an ecology of attentional modulation, in which media environments actively shape cognitive functions. Finally, Eugeni situates XR within the historical arc of what Francesco Casetti (2015) has termed «post-cinema». Here, the experiential logic of cinema – characterized by fixed framing, diegetic containment, and spectator externality – gives way to spatially expansive and sensorially distributed forms of experience. In this sense, XR environments constitute not just a technological innovation but a paradigmatic shift in modes of attention, cognition, and aesthetic participation. The post-cinematic subject is thus conceived not as a viewer in front of the screen, but as a mobile and embodied actor situated within a mediated field of sensory and symbolic stimuli (Eugeni 2015), again a Turnerian liminal space. Eugeni's classification of XR technologies provides a multi-layered framework that synthesizes semiotic, cognitive, and experiential dimensions. Rather than treating XR as a monolithic or exclusively visual phenomenon, his model foregrounds its performative, interactive, and immersive qualities in a dynamic and multidimensional site where media, cognition, and culture converge.

Some merleau-pontian scholars' media perspectives

On similar basis, Vittorio Gallese and Michele Guerra have developed a compelling interdisciplinary framework known as Embodied Simulation Theory, in order to explain how we perceive and engage with audiovisual media. Rooted in cognitive neuroscience and affect theory, their work explicitly bridges the gap between bodily experience and mediated representation, offering a neurophysiologically grounded account of spectatorship, particularly in cinema and screen-based environments. At the ground of their theory is the discovery of mirror neurons – neurons that fire both when an individual performs an action and when somebody observes another performing the same action. Gallese originally identified these neural mechanisms in the early 1990s, and in collaboration with Guerra, extended their implications to film and media studies. They argue that these mechanisms underlie embodied simulation, a pre-reflective process by which viewers internally simulate the actions, emotions, and sensations of the characters or events represented on screen (Gallese and Guerra 2015). This theory challenges the classical cognitive paradigm that posits a detached, analytical viewer, suggesting instead that media spectatorship is sensorimotor, affective, and corporeal. Watching a film – or interacting with any screen-based medium – is not merely an intellectual act of decoding signs but a bodily experience rooted in shared neural systems of action and emotion. For example, close-up shots of facial expressions or point-of-view tracking shots can activate neural circuits responsible for facial movements or spatial orientation, respectively. Gallese and Guerra emphasize that cinema, and by extension XR and interactive media, ‘re-enact’ in a real performative way the perceptual experiences within the viewer’s brain, simulating real-world embodied interaction. This means that narrative comprehension and aesthetic engagement are co-constituted by visceral, non-verbal processes, as in real life. The core concept of the ‘empathic screen’ encapsulates this idea: screens are not windows to representation alone, but interfaces that activate embodied, emotional, and intersubjective participation, exactly as the performance definition we offered before. Their theory resonates with phenomenological traditions (such as those of Merleau-Ponty) and affective neuroscience, situating spectatorship within the sensorial dynamics of presence, movement, and spatiality. In contemporary contexts – particularly in immersive environments like XR – these embodied responses are further intensified, as viewers are no longer passive observers, but sensorimotor participants embedded in the media space. Gallese and Guerra’s embodied theory reconceptualizes spectator-

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ship as a multimodal, affective, and embodied event, offering a biologically and phenomenologically grounded alternative to disembodied cognitive models on media experience, intersubjectivity, and the neurocognitive basis of cultural participation.

Merleau-Ponty's thought seems to be the one of the most influencing *fil rouges* for the scholars we are trying to keep in dialogue in this original connection of mediology, performance and XR. Considered one of the most influent authorities about the French philosopher phenomenology, Mauro Carbone has recently developed an original recognition on the idea of screen, specifically starting from Merleau-Ponty's 'sensible ideas.' Firstly, on his own and in the last book together with Graziano Lingua, Carbone focused on the notions of what he called «arche-screen» and «dividual» (Carbone 2019, Carbone and Lingua 2023). The arche-screen interrogates the historical and ontological conditions of visual mediation. Originating from philosophical reflections on the screen as a *cultural dispositif*, the term denotes not merely a surface of projection or transmission, but an ontological structure of visibility and invisibility, a threshold where vision is both constituted and withheld. The arche-screen is not simply the ancestor of cinematic or digital displays; rather, it is an epistemological figure that precedes and subtends all technical and medial screens, grounding their capacity to mediate, frame, and organize the sensible. Particularly in dialogue with Merleau-Ponty's late ontology of *Le visible et l'invisible* (1964), the arche-screen is theorized as a proto-technical, symbolic interface: a structural fold of experience in which the subject is always already caught in processes of exposure and concealment. The arche-screen thus functions analogously to Merleau-Ponty's 'chiasm,' the intertwining of seeing and being seen, rendering perception itself an event of mediation between its interconnected couples of functions: 'showing and hiding,' 'exposing and protecting.' Rather than understanding the screen as a neutral surface or as a modern technological development, the arche-screen exposes the screen's ontological relevance and historicity. It gestures toward an originary mediality – an always-already mediated condition of access to the world, through other embodied presences and/or technical extensions. This aligns the screen not only with visual culture, but also with modes of being, embodiment, and relationality. It is this primordial role that distinguishes the arche-screen from the cinematic, televisual, or digital screens that historically follow it. As Carbone notes, screens do not simply 'show' reality but 'modulate' it, producing complex regimes of visibility, presence, and meaning via its variations of co-existence. Importantly, the arche-screen cannot be reduced to a specific artifact or historical moment.

Instead, it functions archeologically, in the Foucauldian sense, as a way of tracing the *a priori* conditions of media dispositifs. It is not a historical origin but a transcendental condition that enables the very possibility of visual inscription and performative engagement. From the sacred veil in religious rituals to the theatrical stage, from the mirror to the digital interface, the arche-screen constitutes a paradigm for interfaces variation and development, connecting embodied consciousnesses and media in a reciprocal condition of existence.

In this sense, in contemporary immersive environments, such as those enabled by XR technologies, the relevance of the arche-screen becomes especially pronounced. These environments do not merely reproduce images but generate (apparently) expanded, multisensory fields of presence, reconfiguring the relation between the viewer's body, the internal and external media space, and the simulation it occurs. The arche-screen thus persists within these advanced technological contexts not as a static legacy but as a constantly evolving and varying medium, continuously renegotiated by new and old forms of embodiment, perception, and interaction. Moreover, it provides a powerful conceptual lens through which to reconsider the classical notion of subjectivity, moving beyond cartesian representational models to embrace the co-constitutive dynamics of vision, space, embodiment, and technological mediation. It underscores that screens are not unanimated instruments but primary perceptive architectures of our sensory and cultural worlds. As a direct consequence of this theory, in *Toward an Anthropology of Screens: Showing and Hiding, Exposing and Protecting* (2023), Mauro Carbone and Graziano Lingua subsequently develop the notion of the «dividual» as a key concept for rethinking subjectivity in the age of pervasive visual media. Drawing on philosophical, anthropological, and media-theoretical perspectives, they propose that the contemporary subject is no longer best understood through the classical lens of the individual – a bounded, autonomous entity – but rather as a dividual, a distributed and permeable configuration of selfhood constituted through its exposure to (arche-)screens and processes of mediation. The term describes a form of human presence that is fragmented, inevitably relational, and in some way processual, rather than unified or self-contained. For Carbone and Lingua, this dividual condition is intensified and made visible through contemporary screen cultures, where the subject is constantly subjected to regimes of visibility, surveillance, and interfacial interaction. In such a context, the screen does not simply reflect or represent the subject, but actively participates in its constitution, modulation, and dissemination. Carbone and Lingua situate

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the dividual within an anthropology of the screen, wherein the boundaries between self and world, private and public, inside and outside, become increasingly unstable. The dividual emerges not as a pathological breakdown of individuality, but as the multiplicative mode of being in a world saturated by images and interfaces. In this sense, previous ideas of subjectivity are no longer grounded in interiority or unity, but in multiplicity – its capacity to be affected, shaped, and partially expressed by the screens that surround it. This reconceptualization of the self has profound implications for anthropology, aesthetics, and ethics. The dividual is an always-changing, plural being, open to others and to the technological systems that mediate social life. It challenges the liberal-modern ideal of autonomy and instead foregrounds relationality, polymorphism, and performativity as the defining traits of human subjectivity in the digital age.

Moreover, the dividual resonates with broader theoretical movements that emphasize posthuman, non-unitary, and affective models of the self and of the medium. In particular, Carbone and Lingua's emphasis on screens as quasi-prosthetic extensions of perception and memory further underscores how the dividual is not only a theoretical construct but a lived condition shaped by the material and symbolic infrastructures of mediation. Thus, the concept of the dividual marks a significant intervention in the ongoing redefinition of subjectivity, offering a nuanced vocabulary for understanding how contemporary media technologies transform the experience, structure, and ethics of being human. In particular, the term 'quasi-prosthesis' refers to the (arche-)screen as a technological extension of the body that mediates perception, memory, and relationality. Unlike a traditional prosthesis – which compensates for a bodily deficiency – the quasi-prosthesis does not replace a function but modulates and transforms pre-existing cognitive and sensory capacities. In this view, screens are not neutral tools but affective and epistemic interfaces that reshape how human bodies and minds engaged with the world and with themselves. They function as extensions of memory, perception, and attention, contributing to the constitution of the dividual as a self no longer autonomous and bounded, but distributed across technological and relational networks. The notion of quasi-prosthesis underscores the idea that media do not merely support experience – they co-produce it, integrating themselves into the very structure of embodiment and relational multiplicity. As such, screens become active participants in human becoming, shaping not only what we see but how we think, remember, and relate.

Gesture, touch, proxemics as media(-archeology) embodiment

In *Figure del corpo. Gesto e immagine in movimento* (2017), Barbara Grespi explores the dynamic intersections between visual media aesthetics and corporeality, offering a theoretically rich analysis of how the body and its gestures are constructed, represented, and mediated across different visual regimes. The volume critically engages with a wide spectrum of media forms – especially cinema, but also video art, photography, and digital technologies – to interrogate the epistemological and affective implications of the body as figure and the figures of the body. Grespi situates her inquiry within the broader framework of media archaeology, visual studies, and gestural theory. Central to her argument is the assertion that the body is a pre-given biological entity, but its gestures are both expressive and technical constructs whose visibility is continually negotiated through technological apparatuses and aesthetic conventions. The analysis that Grespi carries out concerns the study of cinema as a bodily extension, but also of the body as the main configuration of the medium of cinema. Through a complex and capillary work, what is clear is a desire to reconfigure the study of visual media starting from and/or returning to the body. In this sense, rather than treating visual media as mere instruments of representation, Grespi foregrounds their role in modulating perception and configuring embodied experience, and vice versa, focusing on faces, hands, postures, gaits. Thus, she remains distinctively attuned to the formal and aesthetic logics through which media shape our experience of the body *and* the visible, making a distinction between these two elements evident only at a theoretical level, and demonstrating how considering them as inseparable is enriching *especially* on a theoretical level. *Figure del corpo* offers a nuanced and extremely diverse interdisciplinary account of the indissoluble relationship between contemporary visual media and the body as a field of existence and activation of them, in a relationship that in turn modifies the way images are incorporated, in ways and spaces that are always new, different, and to be reconsidered. Thus, this approach challenges the static conceptions of corporeality and propose a relational, media-sensitive ontology of the human form, illuminating on the other hand how aesthetic practices articulate the body not only as image, but as a site of knowledge, power, and becoming.

Wanda Strauven’s contribution to screen theory, in some sense, could be located in halfway between the last two theories. Metodologically situated within the broader tradition of media archaeology, in her essay *Touchscreen Archaeology: Tracing Histories of Hands-On Media Practices* (2021), she challeng-

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es the dominant understanding of the screen as a passive, visual display surface and instead proposes a historically grounded reconfiguration of the screen as a tactile, interactive, and multifaceted dispositif. Her analysis is not limited to digital touchscreens but engages in a genealogical excavation of screen-related practices that predate cinema and anticipate contemporary interactive media. Strauven argues that the history of the screen is marked by non-linear developments, where seemingly ‘new’ technological affordances – such as tactility, interactivity, and multi-sensoriality – can be traced back to pre-cinematic devices and practices, including optical toys, magic lantern shows, peep boxes, and early arcade machines. These historical forms already featured aspects of manual manipulation and embodied engagement, thereby contesting the idea that screen-based interaction emerged solely with the advent of digital interfaces. In this sense, her work reveals the screen to be always already tactile, and not exclusively visual, as often presumed in classical screen theory. A central feature of Strauven’s analysis is her emphasis on the hands-on nature of early media culture, which she frames through the concept of ‘playful media.’ By foregrounding the user’s physical engagement with media devices, she positions tactility and kinesthetic participation as constitutive elements of media experience, not secondary effects or options. The contemporary touchscreen, in her view – and immersive media as well, in ours – should be understood not as a rupture but as a variable continuation of a long-standing tradition of interactive and performative media use. This archaeological method has significant implications for how we conceptualize the screen in historical and theoretical terms. Rather than beginning with cinema as the ‘origin’ of screen culture, Strauven invites to look further back, adopting an approach that resists technological determinism and linear progress narratives. She thereby contributes to the reconceptualization of the screen as a historically contingent, sensorially diverse, and operationally complex phenomenon, shaped by shifting practices of perception, embodiment, and cultural technique development. In aligning media history with embodied interaction, Strauven’s work resonates with previously reported theories of embodied spectatorship, post-cinematic media interaction, and neurocultural media ecologies. Her reconceptualization of the screen foregrounds its materiality and performativity, moving beyond theories of representation to explore how screens affect, structure, and involve the body across historical epochs. In other words, her archaeological approach reveals the screen not as a static object but as a fluid interface whose functions, meanings, and materialities have evolved through layered historical transformations. Her work significantly expands the conceptual field of screen

studies, demonstrating that understanding the screen requires attention to its tactile, interactive, and embodied dimensions, across both analog and digital media regimes. Following this line, it could be easier to image how contemporary XR interfaces recapitulate historical practices of manipulation, gesture, and proxemic interaction – traits long present in performance traditions.

Back forward to the theatre

As a closing circle, Antonin Artaud's *The Theatre and Its Double* (2000) could provide us an exemplar theatrical perspective which seems to be directly related with the previous ones we tried to interconnect, anticipating and confirming them. The radical manifesto reimagines the function and form of theatre in modern culture via a critique of Western theatrical tradition and a visionary proposal for a renewed, transformative mode of performance. At its core, Artaud's project is to restore theatre to a ritualistic, corporeal, and metaphysical practice, capable of shaking audiences from intellectual complacency and engaging them in profound, affective experience.

For Artaud, theatre should not be the illustration of written drama but a total art form, grounded in gesture, sound, movement, and visual symbolism in favor of an embodied experience – one that operates not through rational discourse but through visceral impact. Thus, his *Theatre of Cruelty* (*Théâtre de la cruauté*) denotes the rigorous, vital force of existence itself – a metaphysical necessity to confront the real, to expose the unconscious, and to disturb the illusions that structure everyday life. The *Theatre of Cruelty* aims to assault the senses, creating an immersive and overwhelming environment that penetrates the spectator's psyche, bypassing intellectual defenses and awakening dormant energies. Through this 'cruelty,' theatre becomes an alchemical process of transformation, both for the performer and the audience, which he significantly denotes with the terms 'virtual reality.'

Even if his idea of theatre draws upon ritual, trance, and myth, reclaiming the sacred and therapeutic dimensions of performance, Artaud's work can be read as a critique of representational aesthetics in favor of an embodied, mental and physical engagement with the performative event. Moving beyond mimesis, theatre does not merely reproduce the world but reveal its inner forces and contradictions through a not intellectual consciousness. The 'double' in the title refers to the idea that theatre contains within itself the potential to mirror not the surface of life, but its metaphysical

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underside. In this sense, the stage becomes a space of ontological experimentation, where language is reconstituted, and presence – rather than representation – is privileged. Artaud's emphasis on embodiment, affect, and the dissolution of the subject-object divide directly connects with media theories we collected, resonating with contemporary discourses on performative or post-dramatic theatre, immersive media, and dividual plurality, which are particularly amplified in metaverse. His vision of a theatre that goes beyond the intellect and speaks directly to the body and the unconscious prefigures many of the concerns that animate current investigations into performative, neurocultural, and XR studies.

Conclusion: *The Metaverse and its Double*

Despite its marginalization in classic media theory, theatre should be reconsidered as a foundational medium. The performative turn in contemporary aesthetics destabilizes the binary between visual and performing arts. Theatre is not merely a genre but a medium of embodied cognition, social communication, and cultural memory and consciousness. Following this logic, XR can be seen as a continuation of theatrical strategies by other means. It absorbs the body-centric logic of performance, the spatial choreography of stagecraft, and the ritualistic temporality of live action. Yet the underlying logic – of embodied co-presence and influential resonance – remains strikingly similar.

The alphabet, as Havelock argues, fragmented the unified sensory-motor circuits of oral culture, giving rise to a new regime of mental abstraction. Theatre, emerging alongside alphabetic literacy, helped to reintegrate fragmented sensory inputs by providing a shared, embodied space for collective sense-making. Thus, the *théatron* functions both as a site of representation and as a cognitive interface – a place where sensory, emotional, and narrative elements melted into an organized cultural memory. De Kerckhove follows Havelock and situates the emergence of Greek theatre as a cultural response to this cognitive transformation brought about by literature. The theatre functioned as a prosthetic medium, helping pre-literate societies transition from oral-performative to literate-cognitive forms of memory. In this configuration, theatre acts not merely as entertainment but as an information-processing device. It externalizes thought, stages examples, and collective meaning. This structural role positions the theatre as an early medium between body and knowledge. In transitioning from participatory ritual to spectatorial drama, Greek theatre facilitated the internalization of social knowledge. This

transformation was not merely aesthetic but cognitive: a shift from external, embodied recall to internalized, abstract thought. Theatre operates as an early platform for processing symbolic information in ways that parallel later media. As such, the theatre becomes the precursor to contemporary screen-based media, which also reorganize perception, interaction, and self-awareness through technological means. Specifically, it anticipates the immersive logic of XR systems, where users are no longer passive observers but embodied participants in dynamic information ecologies.

For Carbone and Lingua, the arche-screen is always related from and to the human body – the ‘proto-screen.’ This chiasmic logic also governs XR environments. The immersive screen becomes an extension of the user’s proprioceptive and kinesthetic apparatus and *vice versa*, engaging memory and perception in a way that is more generally sensitive and less purely visual. In this respect, XR should be studied not as cinema’s descendant but as theatre’s technological twin. The notion of a ‘quasi-theatre’ describes XR not as a successor to traditional theatre, but as a structural analog: an immersive environment where ritual, representation, and participation converge. We elaborate this framework through the concept of the ‘quasi-prosthesis’ – technological extensions of the body that reshape not only physical capabilities but also cognitive frameworks. XR technologies, as quasi-protheses, do not merely augment perception; they condition how users organize and retrieve memory, interpret meaning, and experience temporality, exactly as theatre does. Moreover, XR itself enforces the reconfiguration of the self as dividual, perfectly stressing one of the most porous, interconnected nature of contemporary human-media experiences. In immersive environments, the user is no longer a bounded individual but a node in a network, enmeshed with technological apparatuses that act as cognitive and sensory extensions. This dividual condition resonates with the notion of quasi-prosthesis, where the screen no longer merely represents but co-produces experience. XR headsets and spatialized sound systems function as prosthetic extensions of perception, reorganizing not just the senses but the very structure of the user. Even Strauven’s analysis seems to support the thesis that XR should be understood through the lens of performance rather than visuality. The act of touching, manipulating, and being affected by screenic interfaces brings the user into a participatory relationship with the medium that echoes, again, Fischer-Lichte’s performance reciprocal influence: in both cases, indeed, the boundary between actor and spectator gets thinner. This conceptualization disrupts the long-standing divide between visual and performing arts. Strauven underlined the archaeological dimension of this analysis, tracing the tactile

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and bodily genealogy of screen practices back to pre-digital, hands-on media. Similarly, XR does not simply add visuals to live performance; it redefines the spatial, sensory, and epistemological conditions of representation. The contemporary convergence of digital and performative practices calls for a reassessment of media and theatre history, re-considering from a different point of view all the interconnected anthropological implications. Gallese and Guerra's theory of the 'empathetic screen' provides a neurocognitive basis for understanding the embodied nature of spectatorship. They demonstrate that viewers simulate the observed actions and emotions of on-screen characters through embodied resonance. This affective mirroring has clear parallels with theatrical performance, where actors and spectators co-produce meaning through presence and reciprocity. In XR, the user's gestures are no longer metaphorical: they are structurally embedded in the medium. Gesture is not just perceived but enacted, creating a loop of motor and bodily engagement that recalls the ritualistic foundations of theatre. This is what Barbara Grespi describes as the 'figures of the body,' a study that underscores the reciprocal influence of the body gestures on moving images development and of visual media on embodied technical and affective expression.

If theatre once operated as a simulation model of perception and cognition, XR can be seen in some sense as its contemporary counterpart. However, XR does not return us to pre-literary embodiment; rather, it introduces a new configuration of embodied, dividial, and technologically mediated, performative feedback loop. The theory of the 'empathetic screen' supports this reorientation. Indeed, it demonstrates that visual media, far from being passive, elicit sensorimotor responses that are deeply tied to embodied cognition. XR, by amplifying the gestural and immersive dimensions of visual experience, extends this phenomenon. It becomes a medium of cognitive performance, one in which memory is not merely stored but enacted through interaction with digital performers and/or environments. The metaverse, often imagined as the zenith of XR evolution, is typically framed within a technological determinism that foregrounds data, networks, and visual simulation. This vision, however, risks effacing the corporeal and performative dimensions of immersion. Reframing the metaverse as a theatrical environment – a digital *théatron* but also a performative space – allows us to foreground the dramaturgical, ritual, and embodied aspects of immersive experience. This hybrid genealogy challenges the historical division between visual and performing arts, proposing instead a continuum in which XR operates as a neo-theatrical medium. It stages the self, solicits gestural enactment, and creates

augmented spaces of affective and cognitive engagement. In this sense, the metaverse becomes not simply a networked interface; it is a performative ecology where the arche-screen becomes a stage, and the dividual spectator, a 'prosumer.'¹

XR, rather than being just a visual medium descending from cinema and computing, should be situated within the broader history of performance and embodied mediology. Thus, both theatre and XR could be considered not only as art forms, but also as evolving mutual epistemic infrastructures. From this perspective, they offer models for understanding how media environments shape not only what we see but how we live, think, and relate. Drawing on media archaeology, phenomenology, and neurocultural theory, we propose that XR shares with theatre a common concern for presence, gesture, and relational human bodies. Repositioning XR closer to the theatre evolution not only enriches our understanding of immersive media but also resists the reduction of digital technology to disembodied visuality. Instead, it affirms a conception of media as relational thresholds that stage and transform human experience through embodied, performative interactions, via a hybrid condition as the one of the dividual, in the quasi-theatre of the metaverse. Framing XR not as a mere technological extension of reality, but as its performative counterpart – a space where embodied presence, sensory intensification, and ritualized mediation converge to explore and expose the hidden relational and perceptual structures beneath screen experiences – means to propose a new concept of metaverse, a double of it as the artaudian one for the theatre. This double, metaphysically and anthropologically central in the approach to the reality, and always in dialogue with the ancient and never old ritual of the search for meaning which the performing arts offer, exists in a mutual precession with the ideas of metaverse. Thus, a new perspective between Performance and Media Studies may arise – a condition of existence for both to be explored, that we precisely propose to call *The Metaverse and Its Double*.

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