



Applying Education in a Complex World

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Applying Education in a Complex World: Teaching and Learning

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INTRODUCTION

Applying Education in a Complex World: Teaching and Learning

Complexity theory, complex systems, complex strategies and a complex world. The range of concepts, practices, scenarios and metaphors through which we consider intricate, interconnected and changing phenomena is vast. The impact of this world view on how we operate is equally large. The education sector, like all those that make up the tapestry of contemporary societies and economies is not – and cannot be – immune.

The argument that the world in which today's students will eventually work, will be different and more complicated than the one they currently know, has become a truism. It guides our thinking in multiple ways. In this scenario, education is becoming equally fluid. We not only prepare students to face the changes we see occurring today, but shifts and developments no one expects, or predicts. We are obliged to think outside disciplinary boundaries. We adapt constantly to changing methods of teaching. We address new and emerging professions. We negotiate the demands of learners, parents, industries and business.

While this scenario may be contested by some, it is also welcomed by others. These proceedings, and the conference from which they come, reflect on its implications from various disciplinary standpoints.

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MUSEUM EVALUATION AS A PRACTICE OF EDUCATION TO COMPLEXITY AND SOCIAL INCLUSION

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INTRODUCTION

Museums, in their traditional sense, have long been esteemed as gateways to knowledge—reservoirs of historic artifacts, artistic masterpieces, and scientific marvels. However, with evolving societal dynamics, the roles that museums play are undergoing a paradigm shift. They are increasingly becoming centers of social discourse, interaction, and inclusion.¹ One proposed way to facilitate this transformation is to harness a multidisciplinary approach that stems from the Groupanalytic theory, the Reggio Emilia Approach,² and the epistemology of Complexity to redefine the human relationship with museum institutions.

Through these lenses, museums take on a new identity, becoming places of hermeneutic and epistemological interpretation. Their collections and proposed itineraries play a pivotal role in fostering the art of questioning. They no longer exclusively serve the museum's users but extend to anyone keen to partake in this transformative journey. The interpretation of the museum's functions thus becomes a dynamic process, constantly evolving, and encouraging the very essence of creative activity celebrated within its walls.

This multidisciplinary approach serves several purposes. Firstly, it uncovers unconscious layers intertwining the nature and purpose of museums. Secondly, it collectively acknowledges the museum's potential for inclusivity. Lastly, it acts as a tool for self-assessment and process evaluation, enabling the construction of meanings, education to complexity, and implementation of democratic participation practices.

ANALYTIC THEORIES TO SUPPORT A NEW VISION OF MUSEUMS

Discovering intersections between the principles of groupanalysis and the contemporary context of museums can yield enriching insights about how museum institutions function and can be improved. Incorporating principles of groupanalysis into museum practices could lead to more engaging, inclusive, and transformative visitor experiences, ensuring that museums continue to evolve as dynamic spaces of learning, dialogue, and social connection. Let us focus on some revealing concepts. Similar to the spaces created in groupanalysis, museums act as shared spaces for exploration, dialogue, and learning. They offer a common ground where individuals from different backgrounds and experiences can converge to engage with art, culture, history, or science. This shared exploration often sparks dialogue, facilitating mutual understanding and cultural exchange, often touching level

that go well beyond cognition and intentionality. Both group analysis and museums provide safe environments for reflection and potential transformation. In groupanalysis, individuals are encouraged to express their thoughts and feelings, leading to self-understanding and potential personal growth. Similarly, museums, through their exhibitions and narratives, can provoke introspection, challenge assumptions, and promote personal and social transformation.

The concept of the matrix in groupanalysis pertains to the intricate web of communications, experiences, and relationships within a group³. Similarly, museums are a matrix of interactions and learning. They connect various artifacts, stories, and people, fostering a dynamic network of experiences that impact visitors differently based on their backgrounds, interests, and perspectives. In accordance with Foulkes' theory, a museum can be envisioned as a groupanalytic matrix. Each visitor forms part of this matrix, bringing its unique experience and perspective. Through shared explorations and conversations, it is a network of interactions, a transformative learning setting. Like a temporary institution, a museum is a place where individuals come together to form a community, engaging with each other and the exhibits. The interaction between visitors, staff, and the exhibits shapes its identity and purpose. This dynamic nature of the museum helps to continually re-evaluate and reconstruct its narratives, much like a process of "working through", which involves questioning and re-evaluating established norms and beliefs. The visitors in this 'learning matrix' gain a broader perspective and challenge their own preconceived notions. Thus, museums, like Foulkes' groupanalytic matrix, become spaces where diversity and plurality are not only recognized but appreciated as sources of new knowledge and perspectives.

The term 'transpersonal' typically refers to experiences that transcend the individual's personal identity,⁴ delving into the realm of shared human experiences, spirituality, or the collective unconscious. Museums, in a similar way, can provide transpersonal experiences. By presenting artifacts and narratives from various cultures and periods, they offer insights into universal human experiences, connecting individuals across time and space.

Finally, both groupanalysis and museum experiences deal with unconscious elements. In groupanalysis, understanding the unconscious dynamics within the group is crucial for transformation. In the museum context, the choice of exhibits to visit, the interpretation of artifacts, and the emotions evoked are all influenced by the visitor's unconscious. Recognizing this could allow museums to better facilitate meaningful visitor experiences. As keepers of history and culture, museums are custodians of our collective unconscious, carrying tales of joy, triumph, pain, and suffering from different generations and cultures. The artifacts and narratives within museums often trigger collective memories, both pleasant and traumatic. This collective remembering can foster a sense of unity, empathy, and understanding, aiding in the process of social inclusion.

THE SOCIAL INCLUSION POTENTIAL

When museums, several decades ago, began to abandon their institutional role as sacred temples of artifacts and evidence of knowledge, rethinking their role towards the public, there was a proliferation of initiatives specifically conceived and organized for categories of citizens considered fragile or with special educational needs: disabled people, refugees, asylum seekers, first and second generation immigrants, members of the LGBTQ+ community, prisoners, low-income people, unemployed people, citizens living in areas of economic and social marginality, or in any case associated with educational poverty and cultural impoverishment.

While this shift recognized the public as a diverse and evolving entity rather than an abstract, unchanging concept, it still perpetuated a linear sender-receiver relationship. The museum was the sender, delivering one-way messages to its various audiences. However, the museum-public-inclusion

relationship in the contemporary world is better depicted as a complex system. This system consists of different components continuously interacting in non-linear, unpredictable ways. The relationship embraces the fact that every user is a complex individual who cannot be categorized neatly and whose behavior is unpredictable and often unexpected.

To elucidate this point, let's consider individuals with autism. The autism spectrum includes numerous variables depending on the individual's functioning, and each person with autism has unique neurological characteristics. Similarly, commonly used categories like age can be imprecise; a distinction must be made between chronological age and cognitive developmental age.

Therefore, the museum-public relationship can be conceptualized as a non-linear complex system, wherein the museum dynamically interacts with each visitor on an individual level. Unpredictability and unexpected occurrences must be embraced as opportunities for enriching the relationship and invigorating the process of meaning creation.

In light of this complexity, social inclusion in museums should not be viewed as a fixed set of rules, but rather as an ever-changing and evolving landscape. The museum becomes a place of possibilities, where alternative behaviors, content, strategies, and configurations can be chosen. The unexpected becomes a resource for understanding the world and oneself, and creativity thrives amidst unpredictability.

The application of S.H. Foulkes' groupanalytic matrix,⁵ provides a fitting framework to address these complexities in museums. Foulkes' matrix underscores the unconscious group dynamics and the constant interplay of individuals within a group. Moreover, it emphasizes the importance of psychological understanding in the functioning of social systems. By recognizing these factors, museums can develop a more profound, empathetic understanding of their visitors and cultivate an environment that fosters true social inclusion.

Museums can be seen as facilitators of profound social exchanges. By creating spaces for interaction and dialogue between educated elites and vulnerable sectors of the population, museums in fact serve as 'temporary institutions' of human relationships: they foster community-building, bridge cultural divides, and nurture mutual understanding among diverse groups of people. In this light, museums have embraced their potential as agents of social inclusion. They have become spaces where differences are not just accepted, but celebrated; where various forms of knowledge coexist, intertwine, and complement each other; and where the collective experience of discovery and learning is given precedence over the individual one. Social inclusion is not a set of recipes to be followed slavishly but must be embodied each time by becoming a place of possibility, in which design, contents, and communication strategies allow the unexpected to become a resource for understanding the world and oneself and for creativity to develop in contact with the unforeseen.

THE REA'S DOCUMENTATION AND ITS PARTICIPATORY PURSUIT

How to implement inclusive practices so that they can be increasingly appropriate to the complexity described? In the light of what was said in the previous paragraph, the evaluation parameters of a given educational intervention in the museum need descriptors that arise with the educational experience itself, that adapt to the experience implemented, which is different every time, personalized according to the human material involved and the objectives that are defined from time to time.

The Reggio Emilia Approach (REA),⁶ originally conceptualized for children's education, applies to museum science, especially concerning documentation practices and analysis of social matrixes. The REA progressive education philosophy that promotes child-led, experiential learning provides a framework for democratizing museum experiences. In fact, this approach emphasizes the idea of

children as capable constructors of their own knowledge. Transposing this approach to the museum context allows institutions to recognize their audiences, not as passive recipients of knowledge, but as active participants in a shared process of discovery and interpretation. This perspective promotes a more interactive, immersive, and personal experience for museum-goers, thereby enhancing the inclusivity and accessibility of these institutions.

In REA, documentation is viewed as a collection of meaningful traces of our reflections about significant experiences. This may take various forms: verbal annotations such as notes or comments; visual representations like sketches or photographs; and digital content like videos. This evidence is collected not only by educators but also by users, encapsulating their unique perspectives and individual experiences. Documentation accompanies the entire educational journey: from planning to implementing, to assessing the outcomes and finally, sharing the experiences. This process is highly collaborative, inviting each participant to share their interpretation and meaning-making, thereby fostering a constructive dialogue. The practice enhances collective understanding and simultaneously promotes an appreciation of differing perspectives. It propels individuals towards a continuous self-transcendence, facilitating a deeper understanding of the world and an acceptance of its complexity.

This process cannot be performed in isolation. It requires a collective approach, acknowledging that different viewpoints and experiences can enrich the construction of thought and the educational process. Here, the principle of groupanalytic transpersonal becomes pivotal, as it provides the framework for understanding the intertwining of the individual and the collective levels, being the subject in constant relation, since birth, with the other (the caregiver, the family, the ethnic group, the culture...) for its own survival: humans, as 'deficient beings', are forced to form institutions and cultures to offset biological inadequacies, making the other truly inclusive within the individual⁷. The process begins with an initial documentation carried out by museum staff and then transitions towards self-documentation. As the experience unfolds, it broadens to include the other at a transpersonal level, allowing a reciprocal exchange of perspectives during and after the educational activity. This back-and-forth interaction enriches the participants and promotes social inclusion by actively integrating the other into the process of participation and meaning-making.

Documentation, therefore, is characterized by a dynamic and ever-changing *modus operandi*. Its flexible and open structure, which doesn't follow rigid phases or predefined levels, readily adapts to the complexity of the unique experiences. With each new visitor, the process renews itself, sparking fresh interpretations and nurturing an environment of inclusivity and learning that epitomizes the very essence of the museum in the contemporary world.

MUSEUMS AS COMPLEX INSTITUTIONS FOR SOCIAL INCLUSIONS

The diversity captured through the narrative practice of documentation becomes an opportunity to welcome many points of view simultaneously, demonstrating that there is not a single absolute and authoritative truth, but that the synthesis that is made is only one of many possible interpretations and that as such it can be re-discussed again, enriched, reviewed in the light of new awareness. Through continuous reflection, the museum becomes a "place of multiple listenings"⁸, of elaborating questions rather than creating answers or executing accessibility protocols towards labels of users identified a priori.

Museums curate and display artifacts and narratives that often reflect the dominant societal norms, values, and histories, which may inherently marginalize certain perspectives, histories, and identities. Recognizing and addressing this bias is essential for promoting inclusivity in museum spaces. Hopper's concept of the social unconscious⁹ can help explain why certain narratives and groups may be underrepresented or misrepresented in museum spaces. Unconscious societal biases and prejudices

can unknowingly shape the way that collections are curated and displayed, thereby reinforcing exclusionary practices and viewpoints.

Museums play a critical role in shaping shared cultural memory, which is deeply interlinked with the social unconscious. By presenting selective histories and narratives, museums can inadvertently contribute to the marginalization of certain groups and narratives within the social unconscious. Understanding the impact of the social unconscious is crucial for implementing inclusive practices in museums. This includes questioning and challenging the dominant narratives and biases that influence museum collections and displays, and actively seeking to represent a wider range of perspectives, histories, and identities.

Museum professionals play a vital role in shaping museum spaces and narratives. Their understanding and acknowledgment of the social unconscious can inform more inclusive practices. This includes diversifying museum staff, investing in ongoing bias training, and fostering a culture of openness to critique and change. Involving diverse communities in the curation process is a powerful way to counter the influence of the social unconscious. Co-curation and participatory practices can provide a platform for marginalized voices and perspectives, fostering a more inclusive and representative museum environment. Museums can serve as important sites for dialogue and understanding, challenging the assumptions and biases embedded within the social unconscious. By presenting alternative narratives and fostering conversations around them, museums can help shift societal norms and expectations towards greater inclusivity.

Museum initiatives that are offered as inclusive and accessible, if examined through the feelings of each one, from pre-established formats can become a training ground for the complexity of reality. While you represent your point of view to others, you represent it to yourself, acquiring awareness of your own way of being, of your own values and of the other people involved in the process. Thanks to everyone's contribution, new language and knowledge are produced, self-learning becomes shared acquisitions, co-constructed together, negotiated in the difference through comparison and exchange and never definitive, because they are destined each time to be called into question and enriched by new contributions, exponentially multiplying the possibilities.

In this way the museum becomes a place conducive to didactic and scientific research at the same time: if through its initiatives it manages to destabilize our given perspectives and acquisitions, allowing us to narrate the difference and welcome that of the other, if it is able to listen, observe, document and provide multiple opportunities for interpretation, it make us available to re-learn, to re-discover and re-study the object in a common investigation that actively and in a non-linear way involves the learner and solicits, through reflection, the ability to discover new relationships between experience data.

The opportunity for knowledge offered by museum objects, conveyed by the gaze of several museum operators through the mechanism of discovery and subsequent cognitive reordering. This is well suited to the complexity of users who, with different learning profiles, have the right to educational customization that takes into account individual characteristics or perceptive and cognitive problems.

Educational messages, as an opportunity for participatory, common, collective growth in which to experience the values of civil and community life, can thus be easily vectorized according to the cognitive levels and potential present in the educational context and lend themselves well to work on perception of a membership.

In particular, the museum, by its very vocation, is a place where one has the experience of learning to read reality using other codes, to put cognitive, emotional, and relational resources to the test by reconfiguring values, identities, behaviors and learning. This process is based on the construction of the interactions between the research subject and the research objects, to choose, once made explicit

through the documentation, what to value because it is considered significant within these relationships.

Therefore, the Museum is an "ecosystem of learning" and by its own constitutive mission of public service, from a static place of reiteration of "original and historical meanings", should become a dynamic space of "semantic collaboration", not between categories of people but between complex individuals in relationship, greatly expanding the learning possibilities that are inspired and enriched by the looks of each one and the relationships that are generated in sharing this experience together.

The construction of everyone's identity passes from being part of a multiplicity that is conveyed through the museum's proposals, and through this epistemological approach it allows us to experience diversity as an enrichment for understanding the self.

Simplifying reality by dividing diversity into categories towards which to direct action means considering all systems of relationships similar and betraying the truth in which instead the details and/or variables are the vital elements to grasp in order to keep the process of understanding of reality, because it enriches the relationship "between individual and individual and between individual and world"¹⁰.

The imagined actions, supported through the documentation process that allows learning to be made visible, must be problematized in order to hybridize and contaminate themselves with new perspectives offered by anyone who wants to be part of the process. Only in this way will we discover that we are all different and all the same in this recognition of being different, and the museum will become, through education in complexity, a democratic place of inclusion and social promotion. The term evaluation must therefore be understood as the willingness to collectively choose what to value among the elements that emerged from the process itself to which they have all contributed with their specific ontology and offering their own interpretation. For this reason, the term education in complexity becomes a paradigm for understanding reality as a constant exercise of self-redefinition with ourselves and with the world.

CONCLUSION

As we transpose Groupanalysis and the Reggio Emilia Approach to museums, we are not merely expanding their function but redefining their essence. They cease to be mere repositories of artifacts but evolve into spaces where social barriers dissolve, dialogues flourish, and new understandings are born. Through this prism, we can truly appreciate the museum's role as an agent of social change and inclusivity.

By understanding museums through the lens of the epistemology of complexity we can reimagine museum institutions as living organisms, that dynamically engage with the complexity of human experience. They serve as places of multiple listenings¹¹ and perspectives, embodying the heterogeneity of human experiences and fostering an inclusive space for dialogue, exploration, and learning. With an approach that acknowledges and values complexity, museums can indeed promote a democratic environment for social inclusion and become agents of change and social promotion. Addressing the bias in the social unconscious offers, in fact, a transformative potential for the future of museums. Museums that consciously acknowledge and counteract the effects of the social unconscious can become truly inclusive spaces that celebrate diversity, foster mutual understanding, and contribute to social justice.

By allowing the REA to inform museum practices, we invite every individual—irrespective of their backgrounds—to perceive, engage, and partake in this shared cultural and educational space. The museum's exhibits thus become not just works of art or historical fragments but significant tools for dialogue, learning, and social inclusion.

Museums, through this innovative approach, can become a locus where cultural exchanges happen, where differences are not merely tolerated but celebrated, and where all individuals are acknowledged and valued. This vision reinvents our perception of museums and their capabilities, sparking endless possibilities for inclusion, understanding, and shared human connection.

NOTES

- ¹ "Museum Definition", International Council of Museum, accessed September 30, 2022, <https://icom.museum/en/resources/standards-guidelines/museum-definition/>.
- ² "Reggio Emilia Approach", Reggio Children, accessed October 30, 2023, <https://www.reggiochildren.it/en/reggio-emilia-approach/>.
- ³ «Group Analytic Concepts: The Matrix». *Group Analysis* 47, n.1_s (march 2014): 40-42.
- ⁴ Franco Di Maria, and Ivan Formica. *Fondamenti di gruppoanalisi*. Bologna: Il Mulino (2009).
- ⁵ Siegmund Heinrich Foulkes, and Malcom Pines. *Selected Papers of S.H. Foulkes: psychoanalysis and Group Analysis*. London and New York: Routledge, Taylor and Francis Group (2018).
- ⁶ "Our research", Fondazione Reggio Children, and Centro Loris Malaguzzi, accessed November 3, 2023, <https://www.frchildren.org/en/research>.
- ⁷ Arnold Gehlen. "Between social science and cultural criticism". In Muller, Jerry Z. (ed.). *Conservatism: An Anthology of Social and Political Thought from David Hume to the Present*. Princeton, NJ: Princeton University Press (1997).
- ⁸ Carlina Rinaldi. *In dialogue with Reggio Emilia: listening, researching, and learning*. Contesting early childhood series. London: New York: Routledge (2006).
- ⁹ Earl Hopper, and Haim Weinberg. *The social unconscious in persons, groups, society*. London; New York: Routledge (2011).
- ¹⁰ "Le persone non sono cose", Ugo Morelli, accessed November 3, 2023, <https://www.ugomorelli.eu/doc/LEPERSONENONSONOCOSE.pdf>.
- ¹¹ Massimiliano Massimelli, Roberta Mineo, and Giulia Tucci. «Listening and Documenting in The Reggio Approach: The Challenge and The Vision Stemming from Bruner's Contribution». *Encounters in Theory and History of Education* 23 (19 December 2022): 184-99.

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