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Convergent Evolution: An Intermedial Approach to Worldbuilding in Videogames and Narrative Fiction

Abstract: The aim of this paper is to show how the concept of convergent evolution can be adapted from genetics to the study of the development and hybridisation of artistic products. In biology, convergent evolution explains why the same mutations may appear in unrelated species that live in different environments. The main mutation I will be focusing on is the introduction of fragmentary narration in the *Elden Ring* and *Black Myth: Wukong* games, and the novel *Mécaniques du chaos*, by Daniel Rondeau. I will argue that all of them use this formal mutation to achieve the same goal, namely a complex and incorporative fictional world, which gives agency to its player/reader to fill ontological gaps in the framework of the story.

Keywords: Convergent Evolution; Cultural Evolution; Intermedial Hybridisation; Ontological Gaps; Spatiality; Corporality; Worldbuilding; Videogame; Narrative Fiction.

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Introduction

The broader picture of today's world must include the rampant emergence and overtaking of artificial intelligence. The subject of many apocalyptic movies nowadays is based on the scenario that humankind could be deemed worthless by an AI or/and become totally subjugated to such a machine. Through their works, many authors debate where the difference between man and machine truly lies and if the two types of intelligence can truly be differentiated. But this traumatic event, in which humanity is being challenged, also has profound reverberations in the arts, where, likewise, the border between individual arts becomes muddy and unclear. I refrain from imposing binary judgements when it comes to cultural change, at least in this context, but it is clear that categories (like the posthuman) push for change, and consequently for the necessity to understand the "process of becoming"[1] that we are inextricably a part of. It is precisely in this overarching context that mutations in the arts arise, because they must either defend or renew their identity. Mutation is

a fitting term, since I will draw meaningful parallels between genetics and the development of works of art. Renewing is often linked to hybridisation between different forms of art, as is the case of the works studied in this paper, since the arts must reevaluate their current identities and the possibilities to transgress them. Thus, it is worthwhile to adopt an intermedial perspective when studying emerging cultural trends or developments.

The level of interconnectivity present today decisively influences what kind of story is worth telling and in what way. As a consequence of ideologies such as de- and postcolonialism, the need for diverse representation and challenging hegemonical identities has become prevalent, but in order to include "small" narratives[2] that challenge metanarratives, in the sense described by the French philosopher Jean-François Lyotard, the tools necessary for storytelling and worldbuilding must evolve into becoming even more incorporative. This also happens because information becomes more readily available, and semiotic channels are more accessible to minorities who can use them to forge new identities, new stories or nuance older narratives.

All three works that I am studying responded to this issue in the same way: they introduced small narrative fragments that build a world, in which the reader or player is invited to fill up ontological gaps left in the framework of the story itself, thus embracing its incompleteness[3]. Since the mutations determine how the fictional worlds take shape, it is expected that they will also alter the space where the events occur, and, consequently, its inhabitants. It is important to highlight the role of the body and space since these two combined can build

identities, stories, narratives, hierarchies and so on, which then can challenge metanarratives or contribute to the (in)completeness of a fictional world. Lucia Simona Dinescu talks about the problematics of virtual bodies in the context of posthumanism[4], taking inspiration from Katherine Hayles's position on corporality and emphasizing the importance of the body as opposed to ideologies such as transhumanism. She then proposes a phenomenological model inspired by Merleau-Ponty[5] and Deleuze and Guattari, in which the body and the space it occupies play a central role. This perspective suggests that emphasizing the body-space dynamic might prove itself useful when analyzing the inner machinery of works, which underwent the same mutation in their form.

Convergent Evolution: A Tool for Describing Intermedial Hybridisation

The key concept of my paper is that of *convergent evolution*[6], the main tool I will use to study and explain the phenomenon detailed above. In biology, convergent evolution refers to the natural process where different species, in response to the same environmental pressure, evolve similar traits that were not present in their last common ancestor. This process is driven by a myriad of factors, the most important probably being pure randomness, because evolution is a driving force for natural selection as much as it is a simple statistical process. Convergent evolution does not imply gradual reduction of species but rather explains a naturally occurring phenomenon that also has a counterpart, divergent evolution, which ensures diversity. Drawing inspiration from the biological model,

I propose a framework which enables one to track down similarities between radically different works, like videogames and books, as well as explain precisely why these similarities appear now and what function they have in the current social ecosystem. I will seek to identify convergent evolution in the case of fictional worldbuilding, as I consider it to be an aspect greatly influenced by the current socio-technological context. Indeed, if theories such as posthumanism impact our perception about society in light of the gradual overtaking of AI, it is to be expected that we will remark radical shifts of paradigm when it comes to envisioning other worlds.

Artworks respond to a certain environmental pressure, which is exerted by technological advancements, the political climate, social trends, and so on. In this paper, I will operate with *second-order cultural organisms*, in the sense defined by researchers L.L. Cavalli-Sforza and M.W. Feldman: "The artisan making a violin, or the engineers and factory workers making a car, are the living organisms or the first-order organisms that produce the pieces and assemble them. Without them, no second-order organisms like the violin and the car would be produced"[7]. Second-order cultural organisms (or SOCOs), ranging from chairs, films, hats, cutlery or videogames, are a direct product of first-order organisms. Since the object of this paper is books and videogames, it must be noted that these particular SOCOs have their form (in a formalist sense) subject to semiotic spaces, such as text, imagery, and many more. I also want to define the niche, which is analogous to the resources available for exploitation by the SOCOs. The niche combines both the story, or content, whose purpose is to be expressed in a SOCO through the lens of a certain combination of semiotic spaces, and the idea that the SOCO should cater to a specific audience, which may drift towards semiotic spaces depending on personal preference. Works from different semiotic spaces may want to exploit the same social niche, either appealing to similar audiences, or wanting to create similar fictional universes. The way the niche develops is mostly shaped by the contextual pressure, and because of a shift in the structure of the niche, SOCOs need to mutate to make the best out of the available resources, i.e. to the best adapted to the environment. In this scenario, it may be that, although the works, or SOCOs, are subject to different semiotic spaces, they come up with the same adaptation to reach their goal. This scenario is the prototype for convergent evolution of cultural products. The works I have chosen exemplify convergent evolution well, and since they come from different spaces, they all want to create complex and nuanced imaginary worlds. The tool they use to do this is fragmented narration, although their inner machinery is different.

This approach to studying trends in literature has its caveats, since separating a contemporary book in fundamental morphological units and establishing a universally agreed-upon taxonomy is virtually impossible. Ideally, in the class of books, one would like to clearly define what a novel is and work with SOCOs only from the realm of the novel, to establish evolutionary relationships with, for example, open-world RPG games. However, using the evolutionary model still proves itself useful when trying to underline trends, to explain why they arise and what tools

individual SOCOs must utilize to find a spot where they can thrive.

It must be highlighted that natural selection and cultural selection of traits do not function the same way, since at the moment all "evidence points to this being impossible in biology: biological 'innovation' by mutation is apparently truly random"[8]. This lack of "pure randomness"[9] makes it way harder to predict in practice if a work will thrive in an environment or not. Cultural mutations may be well-adapted to their social climate, yet not able to survive properly (by that, I mean gain notoriety, be critically acclaimed, and so on). In the same way, a mutation may be poorly adapted to its environment, but as society changes, it becomes increasingly advantageous: in other words, being ahead of the curve, just like many authors and their works only gain notoriety after their death. We can also talk about the exchange between economic and symbolic capital, or lack thereof in case of one-time-bestsellers. Pierre Bourdieu describes the marketplace for literary goods in such conversional terms, but also by adding a dialectic dimension of the field. The latter is regulated through "the opposition between the two poles, and between the two visions of the 'economy' asserted there, takes the form of the opposition between two life cycles of the enterprise of cultural production, two modes of ageing by businesses, producers and products that completely exclude each other"[10].

I also want to briefly mention the relationship between author and literary geography, since authors or their works establish themselves depending on multiple literature-world factors: relationship with literature nuclei, with the periphery, national or international status and so forth[11].

Authors may be poorly adapted to some space, but thrive in another: for example, James Joyce was rejected from Dublin, but was welcomed and gained notoriety in Paris. It is precisely this agency towards reaching autonomy that makes for the possibility of there being literature-world space in the first place[12]. On the other hand, natural species are often confined to some geographical space because of their adaptations, and speciation because of migration usually occurs across multiple generations. This agency of cultural mutations also influences how arts interact with each other, and what exchanges of information occur between them. It may be advantageous for literature to interact with other artistic forms to spread to audiences that would normally prefer films or other forms of media.

Due to the sharp hybridisation, not only does the internal geography of each medium change, but so do the liminal spaces that sit at the border between them. This issue is discussed by Mihaela Ursa in her book *Indisciplina ficțiunii*, where she makes a great case for *remediality*[13] - a concept which emphasizes the connected nature of media. We can therefore expect to encounter a much more uneven terrain in the worlds of literature, art, film, and so on, precisely because cultural mutations appear at a different, much quicker pace, and imply a degree of choice, which genetic mutations do not have. Pascale Casanova mentions, when analyzing authors who have developed in different mediums, that "the sense of revelation is never greater than when one groups together and compares writers who, though they are separated by linguistic and cultural traditions and appear to be opposed to one another in every

respect, nevertheless have in common everything that a shared structural relationship to a central literary power implies"[14]. The transnational perspective of Casanova even makes a good case for implementing a model at the very least akin to convergent evolution, since it discusses the possibility of authors "converging" because of their similar role in a literary geography, despite their cultural differences.

Another important advantage of using this model is that it distances itself from questions of morality, intellectual improvement or creativity. Its only aim is to explain why certain things turn out the way they do. Other models, like the evolutionary theory of Jósef Hoene-Wroński (revised and completed by W. Julian Korab-Karpowicz)[15], rely on the cultural concepts developed in a specific timeframe to establish evolutionary stages.

By treating cultural evolution like a Darwinian process[16], one gains numerous other advantages, namely, in the words of Alex Mesoudi, "the real advantage of placing such processes within a Darwinian framework is that these individual-level processes can be explicitly and quantitatively linked to population-level cultural change. In other words, Darwinian methods solve the perennial 'micro-macro' problem that pervades the SSH by explaining macro-level, population-level patterns in terms of the individual-level processes"[17]. Alex Mesoudi correctly identifies a crucial aspect of this methodology, namely that it adopts inclusive and rigorous methods, which do not allow treating some social groups preferentially. Thus, certain cultural phenomena can be linked to population-change, which presupposes a drift away from the predominance of theory,

towards a practice of considering multiple populations when studying evolution. It should also not be used to assert social dominance, create a new social order, or establish hierarchies. Social Darwinism has been used extensively to assert dominance by appealing to science, but this thought-process has a fundamental flaw: treating evolution as a competition for survival between opponents, rather than a nuanced and complex statistical process. Using methodologies such as applying concepts from genetics to models in humanities should reveal the nuance and rhizomatic nature of society, not help propagate totalitarian and reductive discourse. As such, by taking individual communities into account, one can identify why certain trends of worldbuilding or creating paradigms ultimately arise, thus connecting the microstructure of concrete communities to macrostructural shifts in culture. This uses plurality as a focal point to build a nuanced and inclusive (as much as possible) theory of evolution.

Changes in Fictional Worlds, Completeness and Space: Consequences of Mutations in Form

As I have stated above, the precise mutation I am analyzing concerns the creation of fictional worlds. Lubomír Doležel states that one of the core characteristics of such a construct is incompleteness. While I do agree, I believe the reasoning he gives for it needs improving: "Incompleteness is established by a relatively simple test: only some conceivable statements about fictional entities are decidable, while some are not"[18]. This does not differentiate in any way between "possible worlds of logical

semantics"[19] and fictional ones, given Kurt Gödel's famous result in mathematics that any system of logical statements that is not contradictory is incomplete[20]. The reality of a fictional world is that, because of its mandatory property of using semiotic channels to become interactable with, some statements will always be undecidable because the required semiotic apparatus is simply not there to make sense of it. However, as I will further elaborate, videogames play a special role in the fictional world's economy, since their fundamental interaction with someone from the primary world has an operational goal, that is, the player must complete tasks in-game, and actively doing so virtually "completes" the world to a higher degree and creates a *feeling of completeness*. This sensation is not achievable in the same way in literature, since literary works lack the dimension of operational space entirely[21]. We need to keep in mind that the operational spaces in videogames might not be activated, no matter the struggles of the player. Instead, books often choose to change the form to tell their story in a compelling way. As such, when a story is told through pieces of scattered narrative, the ontological gaps appear in the interface the reader is confronted with, which then corresponds to fractures in the topographical space portrayed in the content.

Another important example of ontological fracture is that of "logical impossibilities born out of interesting plot situations"[22]. Here, Marie-Laure Ryan states that readers "close their eyes on the holes and process the rest of the text according to normal inference processes. This kind of contradiction thus remains compatible with world building and immersion"[23]. This is important in maintaining an aura

of mystery around the inner mechanisms of the fictional world. An infamous *Elden Ring* secret is that Queen Marika and her consort Radagon are actually the same person, although they are presented as separate entities and even have children together. This logical impossibility is presented through superimposed space: the statue that reveals this secret appears to be a mere environmental detail but reveals the secret once the player performs the Law of Regression spell in front of it. The implication is that spatiality and corporality are entangled, since changes in one aspect of the story have drastic implications for the other one. The narrative fragment which hints towards performing the spell is an item description, which is the foremost method of delivering textual information in *Elden Ring*. Thus, the superimposed sheets of topographical and operational space are separated through an action suggested in the presentational space (interface), with space itself being *a priori* organized according to Heisenberg's uncertainty principle.

Uncertainty around the properties of space is also mirrored in the properties of the corporality of characters. They drift across multiple regions of The Lands Between, and the player often finds them in completely unexpected locations, their questline depending heavily on the decisions the player makes and the pathways he chooses. To summarize, while in the case of videogames, the player fills the gaps between different types of spaces, when it comes to books, the reader operates simultaneously on the topography of the story and on the form to repair the gaps in each space separately. In other words, when considering videogames, we can talk

about connectivity between spaces, whereas books rather rely on entanglement between spaces. The key takeaway is, however, that although their internal mechanism is different, they both come up with the same solution, telling a story fragmentarily, and with the same goal, to create a complex and layered world that gives the player/reader agency in completing ontological gaps. Therefore, we have found a typical example of convergent evolution.

Configuration of Characters through Journal Entries in *Black Myth: Wukong*

The idea of creating a world that is, in some sense, complete and connected is present in all three works that I have mentioned. In the case of *Black Myth: Wukong*, the main difficulty of portraying such a world is that one must recreate Chinese mythology in a way that gives agency to minor characters and stories. Therefore, one must resort to the powerful tool that is anachronism. By retracing and reinterpreting culturally meaningful resources, one also pays tribute, in some sense, to the legacy of the postmodernist school of thought. I believe *Black Myth: Wukong* follows in the wake of Fredric Jameson's words, "rather, as in Plato's cave, it must trace our mental images of that past upon its confining walls. […] is meant to derive from the shock of grasping that confinement, and of slowly becoming aware of a new and original historical situation in which we are condemned to seek history by way of our own pop images and simulacra of that history, which itself remains forever out of reach"[24].

This agency is given to characters through short fragments in the journal of the main character, which are a combination of prose and poetry, and nuance the background of the minor characters, who could have easily been overlooked, had the player only focused on the main story. Yuan Wenjie talks about the archetypical structure of image ontology in the development of older sources of inspiration[25], like *Journey to the West*, a literary classic in Chinese culture, which sits at the inspirational foundation of *Black Myth: Wukong*. However, it is precisely through the usage of journal entries and complicating the narrative threads that such archetypical representation is shaken, becoming rather anarchetypical, as Corin Braga puts it: "The archetype, along with all its avatars *(arché, télos, eídos, ousía, enérgeia, idéa, alétheia)*, marks those works that have a central, hierarchical, harmonious, and organic structure, whereas the anarchetype fashions and helps describe works that are decentered, disjointed, anarchic, chaotic and devoid of a unified meaning"[26]. Indeed, Wenjie even mentions that "image realization is the transformation under modern conditions, which commonly is a technologically mediated representation. Image acceptance influences the direction of the infinite semiosis of images"[27], thus underlining the significance the cultural environment has on the "genome" of a work of art.

Another similar research methodology is adopted by Jijiao Zhang and Zixiang Zhou, when viewing *Black Myth: Wukong* through the lens of Empowerment Theory. They also admit that to adequately adapt stories from a distant past to the present needs of the public, one must find a fitting medium, which presents opportunities to produce new experiences. The theory argues that adaptation is an innovative

practice that activates the inherent energy of a classic text's "Thick Power" under the intervention of new media and creative subjects. Reception is the process in which the audience engages in deconstruction, reconstruction, and recreation through interaction[28]. Introducing "Thick Power" and "Thick Empowerment"[29] in a structural model is worth developing, as it can fit well into an artistic economy. However, convergent evolution also aims to explain why a specific work possesses "Thick Power", not just state that a culture simply has fertile grounds without further explanation. Making use of cultural resources often leads to intermedial debates about whether a medium is fit for retelling an older story in a contemporary way. An important upside of switching mediums when dealing with adaptations is that they gain access to another category of semiotic tools, although "they find themselves most enmeshed in the intricacies of the medium-specificity debates"[30]. Often, this leads to divergent evolution, since different mediums allow for usage of different medium-specific tools, but not always. It is precisely because of this that convergent evolution is a noteworthy phenomenon.

In-game, the main types of enemies the player encounters are lesser yaoguais, yaoguai chiefs and yaoguai kings. It is perhaps the first two categories that benefit the most from the journal entries, which make them feel more alive. They become a sentient part of the world, not just a mob whose main goal is to reward the player with resources and in-game currency. The yaoguai kings get the most spotlight, but not all the same. If we take the Yaksha King, there are plenty of cutscenes that include other characters referencing

his motivations, his resentment towards his family, who tainted the sacred, ancient heritage of the Yaksha bloodline. But when it comes to Cyan Loong, one of the four Loong dragon-brothers the player encounters throughout the game, at first glance, he seems no different than his other brothers. The journal entry, however, proves insightful. Seeking refuge, Cyan Loong encountered Yellowbrow, the main boss of The New West area, with whom he had a pact: the dragon would fish in the Frozen Bitter Lake, and, if he were to catch a living thing without moving neither the fishing rod, nor himself, he would be granted peaceful stay in the domain of Yellowbrow. Cyan Loong refused to abandon his principles in favour of the great monk's teachings, which he deemed "utter nonsense"[31]. His quiet stance against the greed of Yellowbrow leaves many travelers stunned, not understanding why someone would choose to defend their own ways, rather than simply bow to a powerful master. The encounter the player has with Cyan Loong during the gameplay has virtually no context, no cutscene, the player having no way of guessing a supposed connection between these two characters if he does not check the journal for further information.

The journal fragments come as complementary, helping to contextualize and offer a higher degree of completeness to the world. This contextualization of the ties between characters influences the spatial relationships in-game. In the case of Cyan Loong and Yellowbrow, it seems that finding an ideological common ground, so that both stand to win something in their bet, corresponds to a common space, The Frozen Bitter Lake. Although it is part of Yellowbrow's domain, he does not control

it fully, which makes it possible for Cyan Loong to take advantage of it and make an unwinnable bet so he can atone in peace.

Item Descriptions in *Elden Ring*: Intermediary Fictional Object Used for Worldbuilding

In the case of *Elden Ring*, even the main story is founded with the help of short narrative fragments. Objects that the player gathers, such as weapons, equipment, and key items, all include an item description, where the purpose of the item in question is described, and, usually, there is a short fragment detailing some backstory related to the item. However, as opposed to *Black Myth: Wukong*, the item descriptions do not merely refine the main story, they form the essential foundation for all the important events. Item descriptions highlight everything from historical events, such as wars being mentioned, to complex motivations of characters, or even link characters together, constructing an interconnected web of relations and political alliances that are not explained anywhere else. When talking about item descriptions, Marco Caracciolo mentions that

> the vast majority of items responsible for environmental storytelling in Soulsring games are *not* semiotic artifacts, because it is never suggested that the text of the descriptions is physically or digitally inscribed on the items themselves. Rather, the text appears to originate externally, perhaps from the voice of a heterodiegetic Soulsring narrator who provides interested players with tidbits of narrative. It is certainly possible to identify this narrator with the voiceover of the opening cutscenes: while the identification is never supported by the game, at first glance the descriptions do seem to display the authorial gravitas we associate with the narrator of the opening[32].

The descriptions can be misleading, yet they undoubtedly remain the most reliable source of information. It is exactly this versatility and complexity discussed by Marco Caracciolo in the fragment above that allows for a layered worldbuilding, using superimposed sheets of entangled realities, that communicate with one another when the player chooses to "percolate" them with time[33]. The fact that the player is at no point in time able to establish a chrono-topological path that the events of the game must have followed makes for something that Porter Abbott calls "real mystery"[34], which remains embedded with uncertainty regardless of the effort the player makes to enact logical order.

Item descriptions are also useful for the player because they disrupt the schemata usually used to make sense of a convoluted narrative. They slowly replace the logical-thinking procedure, which organizes events by a "cause and effect" map, and instead build associations with physical objects, thus conveying spatiality to information. These two concepts, although intrinsically tied with one another, maintain some distance between themselves. The item itself is part of what the researchers Wei, Bizzocchi and Calvert[35] call "the operational space", which is part of the gameplay itself and is meant to be apprehended by the player. When the player finds and picks up the item, space is being

acted upon. The description, however, can only be accessed through a separate, secondary interface, which makes the text itself a part of the presentational space. Marco Caracciolo argues that it is exactly these discontinuities between spatialities, namely operational, presentational and topographical, which make for a compelling playing experience[36]. I would like to go one step further and assert that the gaps between the operational and presentational spaces, left by item descriptions, are a fundamental tool in establishing a feeling of completeness for the player, since they construct topological gaps that the player can then interact with and enhance their degree of completeness "to taste".

I also want to briefly mention the concept of environmental storytelling, since it is linked to the concept of item description, and because I will return to it later when discussing the novel of Daniel Rondeau. In a crucially important discussion, Henry Jenkins mentions that in videogames "essential narrative information must be presented redundantly across a range of spaces and artifacts, because one cannot assume the player will necessarily locate or recognize the significance of any given element"[37]. Jenkins lays the foundation for environmental storytelling, or spatial story, which he argues should be the foremost method of storytelling (and worldbuilding, for that matter), since it does not disrupt the player's flow of immersion. Marco Caracciolo elaborates further on this concept, identifying two main types of environmental storytelling[38]: one that is based on the interaction between the player and semiotic artifacts (such as videotapes, audio logs, letters, etc.), and one of indexically embedded information

in an environment. The latter uses cues in the environment to establish what type of event can happen in a specific place.

Space is particularly misleading in *Elden Ring*, since it is often organized following a principle created by Douglas R. Hofstadter and discussed by Ion Manolescu[39], namely that of *strange loops*. Hofstadter defines strange loops as a process that feels like traversing a hierarchy from top to bottom, but once you reach the peak of the hierarchy, you get back to the beginning. Such a non-Euclidean geometrical description of space is worth using for *Elden Ring*, since the player often feels they are moving forwards, only to take an elevator/platform and arrive back at their last checkpoint.

It is important to highlight here that the restructuring of space undergoes a process of defamiliarization, in the formalist sense defined by Viktor Shklovsky[40]. Indeed, Marius Conkan mentions multiple levels of defamiliarization in the fantasy novel: "The autonomous imaginary object, created through intertwining two possible objects, is perceived as complete on the level of the secondary world"[41]. Although the process of defamiliarization in videogames is different than the one occurring in literature, they share a lot of similarities. In fact, the defamiliarized and rebuilt space directly influences the indexically embedded items and their associated narrative fragments, thus connecting both topographic-operational spaces and presentational ones. A noteworthy example from the literary world is Julio Cortázar's *Hopscotch*[42], a novel which achieves a similar effect when following the chapter order proposed by the author. This highlights a crucial function of item descriptions in *Elden Ring*:

that they exist somewhat in-between the two categories identified by Marco Caracciolo. The items themselves have an operational purpose, which most semiotic artifacts do not possess, while also being separated from the information they convey through an interface that situates the information in the presentational space. As such, they are indexed in the topographical space where they are found, since the space itself dictates which items it makes sense for the player to find. At the same time, they are inextricably related to textual information, typical to semiotic artifacts. Item descriptions in *Elden Ring* are deceptively simple vectors used for conveying information, which function more like hybrids than fixed units, acting on multiple types of spatiality.

The Remembrance items often carry the most valuable information about the fictional world, since they are linked to the key bosses the player must defeat: "Riding atop the boar he called his other half, Gaius was in fact a warrior of albinauric extraction. Both were as elder brothers to the lion, and both were cursed from birth. In spite of, or perhaps because of this very reason, Gaius was both Messmer's friend and the leader of his men"[43]. In this extremely short fragment from the Remembrance of Commander Gaius item, the player is told that Messmer, the forgotten son of Queen Marika, of whom nobody knew anything before the *Shadow of the Erdtree DLC*, actually had a "bigger brother" relationship with his younger sibling, Radahn The Lion, a key character in the main game. Given that Messmer was abandoned by his mother, one would have had no basis to state that he was friends with his other siblings, or that they even

interacted, given the secrecy that surrounds Messmer's entire backstory. Thus, Radahn, a character with a seemingly straightforward allegiance in the base-game, is being effectively rewritten in the DLC, and hints towards a complete turn-around are given to the player through items. The climax of this re-corporealization of Radahn, who the player slays in the base-game, comes at the end of the DLC, where we find out that Radahn soul has been transposed in another demigod's body to fight for Miquella, the main antagonist. *Elden Ring* lays forth typical problems of transhumanism[44], whose advocates promote the supremacy of the mind to the detriment of the body. The boy's love ends up creating a monster out of his older brother and destroying countless souls in the process.

It is debatable whether *Elden Ring* as a whole has a central narrative. In my opinion, narrative impulse would be a much better term to define the central staging of it. We are presented with a backstory, which often operates as a cosmological frame, in the terms of Marco Caracciolo[45] and which is supposed to fuel the player to proceed with their journey. The backstory, though, is vague, and it often becomes hard to keep track of it through the game. The item descriptions then come in handy to establish both thematic and diegetic *braids*, in the terms of Mark. J.P. Wolf[46], which help to bind the fictional universe together, even without a powerful central narrative. *Black Myth: Wukong* uses more conventional means to flash out significant connections between characters, such as cutscenes, dialogues, and scrolls at the end of each chapter, where the narrator shines more light on certain parts of the story. *Elden Ring* assumes a rather fragmentary

framework in the beginning but builds up completeness through engagement with the player. Both games require interaction between the player and the short narrative fragments, but to different extents.

Polyphony in *Mécaniques du Chaos*: An Ontology of Voices

When it comes to the novel *Mécaniques du Chaos*, the narrative fragments act as main components of the novel, although their role in building completeness is to interact not with the reader, but with the narrator, who is also the main character. The fictional world of the novel spans across different countries, ranging from France, to Libia, to Malta. Throughout the novel, it is revealed that almost all the characters have some connection with each other, which is logical from the story's point of view, but connectiveness is also built into the fabric of the plot itself. We can then talk about instrumenting heterotopia, creating "knots"[47], as Brian McHale puts it, to reach ontological grounds. This is made difficult, since the novel contains characters with "transworld identity"[48], for example Muammar al-Gaddafi, "the famous lover of Gaddafi, a blonde who wore a short green dress, and had a raspy voice"[49], whose fictional identity may or may not interfere with the primary-world identity. Umberto Eco mentions that such fictional entities can be equated with their prototype counterparts if one can find a one-to-one correspondence, but this is not a guarantee. This complicates the reader's process of adopting "(temporarily) the ontological perspective of the literary work"[50], as Brian McHale states when paraphrasing Thomas Pavel. Such complications

effectively create a liminal space, where the fictional world can take hold and develop.

The fragmentary structure of the novel, which focuses on individual characters, shapes the book like a journal, telling the reader explicitly where the next part of the story is taking place. This is furthermore emphasized by the small distance between the narrator and the thoughts of the characters, thus making clever use of the free-indirect style. When the focus is on professor Grimaud, the main character, he narrates subjectively. Otherwise, the story seems to be narrated objectively at first glance, but the feeling that the diegetic voice never leaves the reader alone remains prevalent. This is set up from the beginning of the novel, which opens with professor Grimaud stating that he knew all the characters from the novel personally, thus asserting epistemological authority. He then follows with saying that Habiba, who we will find out is a refugee from Somalia, "speaks closest to my heart"[51]. This makes for a great deal of immersion, and, combined with the storytelling style full of emotion, breaks free from underneath the mask of the third person narration: "getting up, walking, coming out of the cave, breathing, looking at the sea, everything feels almost natural to her. *I am a walking and talking dead*"[52]. At the end, Habiba's words are marked by the usage of italics. There is no clear sign that a character's words will follow, since the speech of the narrator, the actions Habiba performs or her thoughts are all woven out of the same material. There seems to be a need for a conscious filter for the story, someone who can put together all the spread-out pieces of narrative content, hence achieving the feeling of a complete and connected world.

It is important to mention that environmental storytelling, as mentioned above, is present in the short fragments, because every one of them starts with a small note that mentions the location of the next part, for example: "*The American Embassy, Tripoli, Libia.*" This acts as indexed information, not unlike the short text that appears in *Elden Ring* and *Black Myth: Wukong* when the player enters a new area. It asserts what character the reader can expect to encounter next, but, at the same time, prepares the terrain for subverting the reader's expectations.

The short fragments also serve in establishing polyphony[53]. It is somewhat true that polyphony is limited by the structure of the novel for the reasons mentioned above, as discussed by Achour Fatma: "These voices […] enunciate utterances of which the responsibility is taken by narrator and persons of the history"[54]. However, this does not make the events subject to an overarching, uniform discourse, which tries to explain the events that happened through a singular point of view. In the same way as heterotopia, polyphony is being used as a structural tool to establish an ontology, communicating with the multiplicity of spaces to create dialogic-ontological grounds for the fictional universe. Polyphony and heteroglossia arise, since there are parts of the novel where the characters do not even speak the same language. Habiba is a Somali immigrant, she only starts learning French later, when she gets in contact with all the others. The ending is also significant, when Rim, the girl professor Grimaud has been grooming to replace his wife after her suicide, ends up kissing Bruno, a former student of professor Grimaud. Heartbroken, Grimaud feels angry and betrayed ("None of them sees me. Too busy, scoundrels"[55]), yet a few short chapters later, when reminiscing about everything, Grimaud seems much more detached, showing little to no resentment towards Rim and Bruno, rather being just disappointed with himself for not having had foresight: "I was not mad at him anymore. Our lives often arrange themselves according to some mysterious cycles. We always understand them afterwards. Too late. The present often remains unintelligible to us"[56]. We identify here a good example of internal polyphony, of which there are plenty in the novel.

By using professor Grimaud as filter or reference point across the novel, the voices that emerge through polyphony and heteroglossia become more nuanced and are rather depicted as parts of a chaotical and ruthless system, than as agents of clear-cut and subversive narratives. The structure of the novel itself also hints towards an incorporative view on reality, since the only distinction between the narrator's discourse and the words of the characters is usually the usage of italics. This suggests that heteroglossia and polyphony are used as ontology-defining tools but with the aim to create a fictional "acoustic" mesh, where voices struggle to affirm themselves and often remain captive in the melting pot of discourses that is the fictional reality itself.

Conclusion

I believe I managed to shine some light on the reason similar adaptations of narrative construction and worldbuilding have risen here. That is, the niche they exploit is essentially the same: the goal is the portrayal of a complex and connected world,

but, in general, the more complex a system becomes, the harder it is to handle all its quirks. The way *Black Myth: Wukong*, *Elden Ring* and *Mécaniques du Chaos* solve this problem is exceptionally clever: they shift the responsibility of pulling everything together to someone else.

I also want to assess the concept of organicity, since it has already been used in literary studies with different connotations. In his defense of William Shakespeare[57], Coleridge used this term to describe how a poem grows all at once, its parts interrelated and working together. While there is value in the idea that a literary work of art is more than the sum of its parts, it cannot, by itself, yield satisfactory conclusions when researching specific developments in modern art. Organicity alone can describe a state of being, but my goal has always been to explain, insofar as I can, why things are a certain way, why they develop in a certain way, and what we can expect for the future. Although, from some point of view, we may draw meaningful comparisons between objects of interest of the natural and humanistic sciences, it is important to maintain a distance between the two, so that we do not fall into the trap of a reductive, overly generalizing perspective.

The term convergence has also been previously used in relation to media development by Henry Jenkins in his book *Convergence Culture, Where Old and New Media Collide*. Jenkins rather refers to the hybridisation of media, talking about merging of functionalities not only in media objects, but also in the mentality of the general public, since "convergence occurs within the brains of individual consumers and through their social interactions with others. Each of us constructs our own personal mythology from bits and fragments of information extracted from the media flow and transformed into resources through which we make sense of our everyday lives"[58]. In his perspective, convergence comes more akin to a stream, whose flow pulls together functionalities and information. I used the term *convergence* in a more specialized way, referring to specific (formal, in the case of this paper) functional/morphological units. Convergent evolution emphasizes a similar function shared between two SOCOs and adapted by a different internal semiotic apparatus. Convergent culture, as Jenkins describes it, implies participatory culture and collective intelligence[59], which can be used to describe the process by which SOCOs evolve through agency, preferring some adaptations to the detriment of others.

However, one must also underline the core idea that works of art also develop in convergent ways because it makes sense to do so in their semiotic space regardless of what happens across other types of media or art. To explain more clearly, it would have made sense to introduce short narrative fragments in *Elden Ring* and *Black Myth: Wukong* regardless of how narration develops in literature, because it is fit for the purpose of building a fictional universe that can easily be expanded into a s*tory-world*[60], that pretends to be completed by the player, and so forth. It is also because of the intermedial nature of culture today that in-game narration was able to develop into, in the case of *Black Myth: Wukong*, a hybrid of prose and poetry, inspired from literature. These two factors combined, namely independence and willing hybridisation, allow for the final product to look the way it does. Therefore, I advocate for a more

specialized use of the term convergence, which leads to a much more nuanced discussion of the cultural phenomena.

The framework I have used enables the careful study of the development of works of art in relation to their environment and other semiotic spaces, introducing a semblance of order into a vast, complicated and uncontrollable system. I have only drawn inspiration from the field of biology, and, from then on, worked to adequately model a useful framework in the study of humanities. The crucial aspect one must take into account when operating in the humanities is that precise methods like DNA sequencing[61] are virtually non-existent. This can also prove advantageous, when one understands the rhizomatic grounds in which cultural products are deeply rooted. Until more advanced research methods come about, proofs that assert evolutionary relationships must showcase profound knowledge of related works or fields of study.

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