

Evaluating the Coherence of a Cinematic Universe as a Prerequisite for Worldmaking in Digital Cinema

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Abstract

The concept of worldmaking in cinema is closely connected with the use of special effects, especially computer-generated imagery (CGI). Digital technology has dramatically increased the level of detail and complexity of synthetic movie worlds, with a dual outcome: on one hand, it is much easier now to sever the connection with a pro-filmic reality, allowing room for synthetic worlds to arise as potentially autonomous; and on the other, viewer experience of cinema needs to accommodate this new technological reality. Following these observations, the present paper is a contribution to worldmaking theory with special focus on cinema; it assigns primary importance to coherence, understood here as the threshold level of unity among the composed elements in a movie, which essentially renders the worldmaking credible and, therefore, successful. Coherence is discussed as a desired feature of the cinematic universe, a generic concept that applies to any given movie and is comprised of the cinematic story and the cinematic world, both of which need to be made with acceptable coherence for the sake of proper worldmaking. The paper first establishes the nature and significance of these three concepts in relation to proper coherence, and the challenges posed to them by

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CGI. Then, it draws a distinction between local and universal coherence in worldmaking: the former refers to the viewers' experience of worldmaking as a cognitive process which works in real time during movie watching, whereas the latter refers to worldmaking as a literary or creative term, i.e. the expansion of single movies into much wider franchises. Therefore, the paper aims at enhancing worldmaking theory by clarifying the different contexts of coherence, i.e. viewer experience and artistic creation; and by doing so, the purpose is to provide the approach with a kind of interdisciplinary impact that can further support its applicability.

Keywords

worldmaking, coherence, cinematic universe, cognition, franchise, CGI

Introduction

The concept of worldmaking over the past few years has become a focal point of interest for cinema theory. The obvious reason for this has been the significantly enhanced world-building capacities of contemporary moviemaking, increased and facilitated tremendously with the use of computer generated imagery (CGI). The incomparable easiness, in both technical and financial terms, of creating more expanded and detailed cinematic worlds has liberated the creative impetus of production design, inevitably leading to an increase in the quantity of movies that are set in environments that clearly depart from real-world backgrounds, such as e.g. science fiction and fantasy. One of the main characteristics of these technically new cinematic worlds is their complexity and detail potentials, which can endow them with a level of internal coherence that solidifies their credibility as fictional worlds. The immediate side effect of this has been the even more ardent return of issues related to the ontology of cinematic or generally fictional worlds, their juxtaposition with pro-filmic reality, and the position of spectators relative to those worlds, especially when the latter become more immersive as in e.g. 3D renderings, etc. Therefore, as a consequence of this apparent acceleration of the use of high technology in moviemaking, cinematic worldmaking transcends the confines of the medium and calls for a theoretical framework that will allow it to be situated opposite reality itself.

Taking these reflections into consideration, the present paper aims to approach worldmaking in cinema through an assessment of the notion of coherence. In agreement with older established approaches such as the one by V. F. Perkins (1972), the argument here assumes that coherence is a necessary quality for cinematic worlds to become credible for audiences. Furthermore, an effort to establish coherence obviously entails constant complementing, with the use of details and features that will keep bringing the fictional world as close to a sense of completion as possible, as far as spectators are concerned. The discussion unfolds in three parts: the first part defines the na-

ture and constituents of cinematic worldmaking by deploying the concept of a unified Cinematic Universe, comprising the Cinematic Story and the Cinematic World. The second part explores the notion and importance of coherence in relation to the Cinematic Universe and its two constituents. Finally, the third part delineates and explains the two distinct ways in which coherence as a world-building process, both in a movie and its by-products, should be understood. More specifically, the argument establishes a differentiation between cognitive processes, specifically the comprehension mechanisms employed in real time while watching a movie, and creative processes, which are related to the industry and the means that it uses to build and expand a Cinematic Universe for public consumption. This differentiation is meant to contribute to a resolution of issues related to world-building practices, while at the same time providing a cognitive parameter which aims at expanding the applicability of the model.

This paper is based on a number of presuppositions. The first and perhaps most important of these is that cinema has always been by default a high-tech medium; as such, despite the various experimentations and changes, it would be naïve to claim that it is the sudden and unprecedented high-tech turn inaugurated with digital cinema that creates more elaborate worldmaking. Lucia Santaella Braga's model for discussing the evolution of image production, for instance, which distinguishes between the prephotographic, the photographic and the postphotographic¹, is explicitly based on "the manner in which images are materially produced, and which instruments, techniques, means, and media are utilized in image production" (1997: 121-122). Braga's comprehensive model is based on the technological aspect of imaging media for an obvious reason, which is well exemplified by cinema: the shift from puppetry, cardboard, and animatronics to CGI, far from being a transformation of cinema, is perfectly aligned with the default, technically creative nature of the medium. Therefore, it is not only unnecessary, but also probably mistaken to approach a theoretical question on the nature of cinematic worldmaking under the assumption that contemporary cinema is differentiated from cinema of older times; to consider it as naturally evolved instead of different is much more appropriate and accurate, sparing any implications that would separate the two. The second presupposition is related to this potential search for an appropriate theory. Specifically, if one is looking for such a theoretical framework that unifies the past and present of the

¹ In Braga's model, the prephotographic refers to representations of the mental or the real world in handmade creations, connecting "nature and the subject's imagination" as Braga aptly puts it (1997: 128); the photographic refers to capturing images of actual objects from reality with some kind of recording apparatus; and the postphotographic refers to synthetic images of objects, created entirely with digital technology (1997: 121).

medium, resorting to the physical mechanics of vision should be a priority; no matter what expressive and thus also creative outlets are used in any kind of movie, vision still is the main point of reference for the entire experience of cinema as a whole. Third, CGI worldmaking has gone so far already, that, if done right, can in fact be more visually impressive and elaborate than the real world as far as those few hours that the movie lasts are concerned. As such, synthetic worlds in cinema should be seen a lot more as a wider experience rather than simple entertainment, let alone an ordinary visual encounter.

Finally, a significant issue in worldmaking is where exactly the fictional world stands in relation to the real world, an issue further accentuated in postphotographic imaging, which, as Braga defines it, is a key aspect of contemporary digital cinematic production. Answers to this question may vary, as categorizations of fictional worlds also vary across theories. James Walters, for instance, discusses movies where characters interact within the same narrative with more than one separate worlds which are in some way contrasted to one another, and provides a useful terminology: he distinguishes among Imagined, Potential and Other cinematic worlds, depending on the ontological relation of each type to the world that the characters understand as real and their position within it (2008: 10-11). Expanding this terminology outside the narrative of a movie, i.e. to the relation between fantasy cinematic worlds and the reality of spectators, the fictional worlds in the present discussion would be probably closer to Other worlds, which, for Walters, present “an ontological zone discontinuous to the real world that is left behind” (2008: 157). The difference is that Walters seems to stress a travelling of characters from their own real world to an entirely different one, whereas in fictional worlds, as they are understood here, this procedure is hardly a prerequisite, as the focus definitely includes cinematic worlds that function independently of our reality or, for that matter, of a fictional reality that represents our own. Still, the common denominator in all such cases of worldmaking, and especially in the variation used here, is the tendency to define the fictional world as partly established on knowledge from the real world. Kendal Walton with his Reality Principle, as well as Marie Laure-Ryan building on David Lewis’ principle of Minimal Departure, demonstrate this kind of knowledge as the binding agent that receivers, in this case spectators, resort to when they encounter gaps in a fictional text that they have to somehow comprehend; and that the source of this knowledge is real life, which includes one’s training, so to speak, in worldmaking practices through a previous exposure to other fictional worlds through the arts. All these pre-suppositions are issues that reverberate through the present study.

The Cinematic Universe

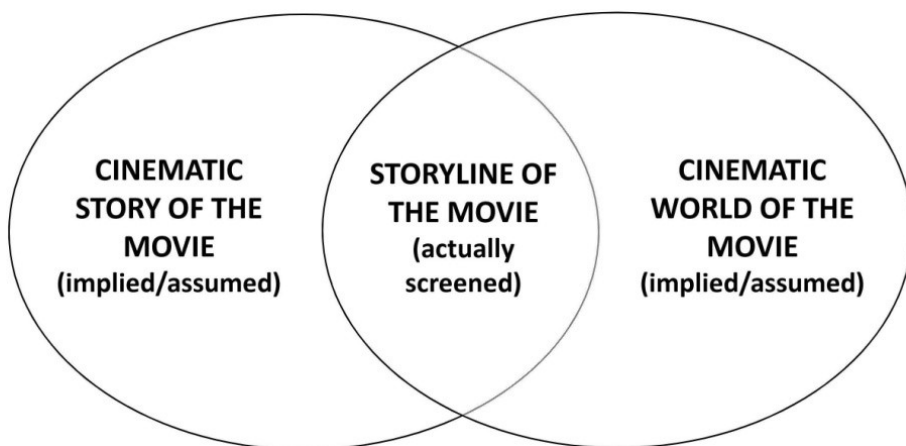
Understanding world-building in cinema essentially means conceiving it through the notion of the Cinematic Universe (CU), which is the sum of its two constituents, the Cinematic Story (CS) and the Cinematic World (CW)². Broadly speaking, the CS refers to the non-tangible, one may say, aspect of the fictional world, i.e. all actions, events, concepts, etc., whereas the CW refers to the more tangible aspect, i.e. anything that relates to the way the fictional place and its constituents are visualised. The purpose underlying this model aims at supporting individual movies as well as franchises, series, sequels, etc.; i.e., not only the world-building processes within movies themselves, but also the wider world-building that is, or may be, potentially created around them.

More specifically, the CS is a concept that encompasses those sets of elements inside a CU that form the matrix of things not seen, in the strict sense of the word, but play an important role in the credibility of the worldmaking as a whole. The list includes any kind of element related to events and their implicit background. An important element that is included in the CS is that of narrative events: all actions and their equivalent reactions, as well as events that take place within the storyline and the ways or reasons that connect those events to others, establish patterns that should be normally recognizable by spectators, regardless of their degree of resemblance to possible real-world equivalents. It should be stressed here that narrative events are not the only ones included in the CS; the term “story” would tempt one to think so, but its meaning here is obviously much more encompassing. The purpose is to comprehend that events in the fictional world, as in the real world in fact, are manifestations of underlying social and personal dynamics, which also must be taken into consideration in worldmaking. Consequently, implicit yet integral aspects of events are all elements that are associated with characters and how the latter are constructed: their general or specific traits, their variations in behavioural patterns, the relationships among them, etc. The CS also includes other elements of this sort, such as e.g. general beliefs or customary behaviour, established, common or scientific knowledge, background information, histories, etc. All these elements form a network that, if made strong, coherent and credible enough, can hold together an aspect of the fictional world that in the real world would approximate a society or culture. The fact that the latter concepts have significant impact in the real world makes it both reasonable and logical to expect a level of complexity in its fictional counterparts that will be relatively convincing.

² For reasons of convenience, acronyms will be used for these three terms throughout the paper.

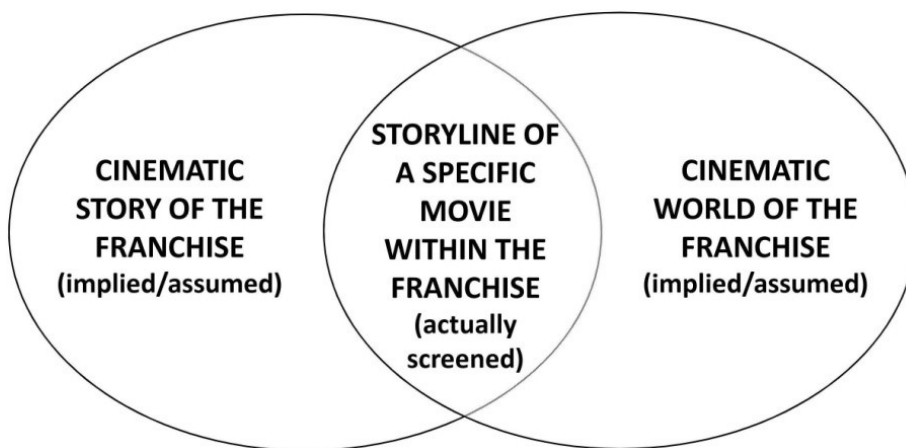
The other constituent of the CU, the CW, comprises the physical world of the movie. Simply put, it is the more visual or haptic elements of the CU, or the place in which storylines happen, with all its encompassing elements. The most immediate concept that comes to mind is that of setting or physical background. This is possibly the part which has received the most attention from production design teams, as it lies at the heart of the cinematic medium, i.e. the use of visually appealing imagery. Of course, it extends beyond the notion of setting to include all objects, clothing, natural elements, flora and fauna, technology and its related equipment etc., as well as all other paraphernalia that may or may not exist in real life, but have a specific usage and reason for existing inside the operational rules of the fictional world. This visual part of the CU normally needs to be made with an aesthetic as well as functional uniformity that not only does not disrupt but actually enhances the perceived coherence of the fictional world. The spectator will not immediately relate to a made-up object, for instance, because it has no equivalent in real life; therefore, its existence inside the fictional world has to serve a convincingly specific purpose which will enable it to align with what would be normal to see inside that CU. Finally, as in the CS, the elements of the CW also require a threshold level of convincing complexity so that the fictional world of the movie appears as functionally complete as possible.

Successful world-building is a concept that normally expands far wider than a specific storyline, which means that the CU as a concept is also much wider than whatever can be included in the runtime of a certain movie. This means that one should understand both the CS and the CW as including and encompassing sets of elements that are much more than what gets any screen time for whatever production-related reason. In fact, in successful world-building, all but a handful of their elements are assumed or implied; it is impossible as much as it is unnecessary to screen either the CS or the CW in its entirety. The screened part of a movie, i.e. what the spectators get to see on screen, is one of the potentially infinite yet narrow areas where the CS and the CW intersect, contributing parts of their presumed sets of elements for realising the specific storyline that spectators see on screen. In other words, in successful worldmaking the CU, like the real world, may contain an infinite number of events, stories and their intersections, as well as locations, characters and objects, and the movie that audiences actually get to watch contains only a fragment of those. In this sense, successful worldmaking both invites and enables spectators to be able to imagine the storyline taking place within a much wider CU, which they do not see and have no experience of:



*Figure 1:
The CU of a specific movie*

This conceptualization of the CU, as seen in Fig. 1, not only explains the storyline of a specific movie within its wider CU, but also conveniently explains its position within its franchise, in cases where there is one. The expansion of a specific movie into a franchise is fuelled by elements that are related to that movie, drawn from its wider CU:



*Figure 2:
The CU of a movie within a franchise*

In Fig. 2, the same concepts from Fig. 1 work just as well for movies that belong to franchises. When expanded to the level of entire franchises, the specific movie that the spectators see on screen is an overlapping of those parts of the CS and the CW that coexist in the narrative that takes up

screening time, and are still connected to other parts of the franchise that may appear in other movies or products like e.g. games, books, etc. All other elements of the CU that do not appear in any part of the franchise remain contextually implied parts of the wider worldmaking of the movie.

Taken one step further, these traits of the CS and the CW not only delineate but also necessitate the adequacy of coherence among them, accentuating its importance for a successful world-building practice. During the creative process of a fictional CU, especially one that companies intend to market further using a franchise, coherence among elements should normally ensure that the existence of everything included within the imaginary worldmaking of the movie is justified and matched or at least that those elements are compatible with one another. When the complexity of such a CU is gradually realized in the fragmented product lines that comprise a franchise, there is an increased need for keeping track of significantly more details that have to remain coherently connected. With companies normally creating franchises to capitalize on projects they trust in terms of expected revenue, coherent CUs are essential for building the loyal fan base necessary for fuelling financially those projects. In both cases, i.e. individual movies and franchises, the challenge is that this compatibility among elements needs to be self-explicable on the basis of the rules and norms that are considered normal or expected within that specific worldmaking. Coherence is thus probably one of the most important features in ensuring the level of truthfulness of the world of a movie, and consequently a critical parameter that may affect the overall impact that the movie will have on audiences, and thus its box-office value.

Coherence and credibility

The main purpose and value of coherence is the fact that it will provide the credibility of CUs that will eventually meet with the approval of spectators. When V. F. Perkins discussed the notion of coherence in moviemaking, he understood it as a “prerequisite of contained significance” (1972: 117), i.e. of the desired quality in a movie that should emanate from the complex coordination of the qualities that are intrinsic to the cinematic medium. In fact, for Perkins this concept of significance lies somewhere between understanding the fact that each constituent element in a movie has its own given and pre-existing meaning, and the dynamics that arise from their correlation in the way that the moviemaker handles and fuses them together. Correlating these pre-existing meanings is based on the fact that “a movie draws non-stop on the values and knowledge which we bring to it” (1972: 117). The

appreciation of a movie is thus established on such correlations of elements, which constantly strive towards maintaining a balance between credibility and significance:

The movie is committed to finding a balance between equally insistent pulls, one towards credibility, the other towards shape and significance. And it is threatened by collapse on both sides. It may shatter illusion in straining after expression. It may subside into meaningless reproduction presenting a world which is credible but without significance (1972: 120).

For Perkins, despite the fact that the experience of the real world provides spectators with the toolbox to comprehend the cinematic one, the relationship between the two is not one of faithful correspondence, and credibility should not be confused with authenticity. The latter is effectively negated as a concept once spectators respond positively to the made-up world of a movie, as credibility within the world-building of a movie means faithfulness to the laws that govern that made-up world (1972: 121-122). Specifically with regard to fantasy cinematic narratives, Walters stresses the significance of Perkins' argumentation, asserting that making creatively bold decisions in the construction of a fantasy world should never be at the expense of the internal consistency of that world, as such steps could throw it off balance and compromise the illusion of credibility (Walters 2011: 117).

It is obvious that fantasy CUs are significantly more fragile in this respect, and that acquiring and, even more so, maintaining the approval of spectators is a much more delicate issue in this kind of world-building. In movies, either older or contemporary ones, that rely on shooting on location or at least use settings based on real-life locations, spectators are able to acknowledge what they see based on their own familiar past experiences from real life, such as screened settings, props, and event actions and behaviours. Also, in the past, movie production containing fantasy elements was nowhere near as ample as it is today. Contemporary moviemaking on the other hand demonstrates a rapidly increasing usage of digital graphics used for rendering elements not existent in the real world. The constant introduction of visual or functional novelties puts stress on the balance between the CS and the CW, as normally the former is still modelled more faithfully on real life patterns whereas the latter keeps getting more extravagant, causing such movies to manifest a varied degree of distance from the real world. Spectators will recognize familiar patterns in the CS such as events and their connections, intentions, behaviours, etc., but not as many elements in the CW, such as settings, characters, props, etc. Many of the latter are entirely artificial, i.e. most probably digital and not drawn from pro-filmic reality. It seems therefore that the in-

creased use of CGI and the complexity of franchising makes contemporary moviemaking in general far more vulnerable to problems of coherence and thus also of credibility compared to the past. Nevertheless, this lack of balance between the CS and the CW which makes credibility more fragile also has the interesting side effect of revealing an insistence on the preservation of elements from the CS specifically. This effectively shows that it is mostly the CS that underpins the coherence on which worldmaking is established.

It becomes obvious that, in building a theoretical model of cinema comprehension based on cognitive grounds, coherence and credibility are established on the preservation and reinforcement of the rules that govern the CS in a movie or franchise. Before anything else, such a model requires a recognition that spectators primarily encounter visual stimuli, the meaning and function of which they are called to handle during the process of movie watching. The elementary tool that spectators use in that process is the knowledge that they come pre-equipped with when they enter the movie theatre, which comes from real life as well as from exposure to similar genre or type of movie narrative. This latter kind of experience is effectively an unconscious training into a set of features that, in time, acquire an expected functional normality within a certain kind of CU. The spectator's anticipation for such a threshold level of normality is what makes this negotiation of visual meanings a constant effort to accept the CU as a coherent, credible realm.

Especially in digital cinema this threshold normality is at stake, exactly because coherence itself is permanently at stake as well. The visual novelties in the CW of such movies clash with the functional familiarities in their CS. Elements in the CS will normally draw on the matrix of real life functions, whereas the creative tendencies in the CW would do the exact opposite, thus calling for much more elaborate cognitive operations on behalf of spectators. Nevertheless, this unbalance between CS and CW elevates the role that the former plays in these cognitive operations: it seems that this familiar matrix of the CS provides the elements that actually compensate for the unfamiliar ones in the CW. This essentially means that the CS will create a framework of familiar patterns on which any unfamiliar elements of the CW will be situated. In a way, this process is similar to what Ryan has called the "Swiss cheese ontology"; the rationalities of a text are its solid parts, containing the hollow or irrational ones, thus allowing the receiver to hold on to something rational in order to make inferences while trying to comprehend the fictional world (2013: 145-146). Similar rationalities will endow coherence in a CGI movie, provided by the CS which will support like a kind of invisible functional infrastructure the extravagant, visual surface form of the CW.

Under this scope, coherence is an overall sense of a movie rather than a set of pre-defined checklist of rules. It is essentially secured by the specta-

tors grasping and holding onto things they can recognize immediately and effortlessly, so that they can handle the things that they might have trouble with, in this case the CS and the CW respectively. As spectators are obviously guided through the rules of a synthetic universe on screen much more slowly compared to watching movies that represent aspects of their normal, familiar reality, the same reliance on recognizable patterns of events or behaviours from real life even in digital CUs becomes more mandatory for the cinematic experience, and at the same time more precarious. This essential process is described by Kendall Walton's Reality Principle, which states that the resources used in processing information are the same in fiction as in the real world, since we utilise "whatever knowledge of human nature we may think we possess, and any relevant life experiences we have had", thus assuming a kind of internal consistency in the fictional world which resembles the one in the real world (2008: 34). Similar to Walton's position, Ryan's comment on the way spectators understand worldmaking with the use of their previously acquired knowledge and experience also entails such an effort towards coherence:

[W]e reconstrue the world of a fiction and of a counterfactual as being the closest possible to the reality we know. This means that we will project upon the world of the statement everything we know about the real world, and that we will make only those adjustments which we cannot avoid (1980: 406).

These adjustments made to the reality that spectators project on this process of reconstruing newly encountered fictional worlds aim at establishing the latter as functionally credible. In simpler words, they mould the CU into a coherent, to the extent possible, entity, which will necessarily draw heavily on previously known elements. The source for those elements, based on the discussion so far, is more easily mapped on the CS and far less on the CW.

The notion of coherence as it has been used so far means that whatever is presented on screen meets certain expectation standards that spectators have. Having such standards by definition implies that the worldmaking in the movie will constantly be measured against knowledge, the weight and importance of which are not really debatable as far as spectators' comprehension is concerned. When David Bordwell describes the spectators' search for usable information during movie-watching, he cites one of the Formalist types of "motivation", specifically "realistic motivation", as a "notion of plausibility derived from some conception of the way things work in the world" (1985: 36). Regardless of the highly structure-driven framework for cinema comprehension that Bordwell develops, and although the concept of the CS, which is the focus here, is much wider than the confines of narrative only, the

value of the concept in the present discussion lies in its dependence on “what seems lifelike to someone versed in specific conventions”, also remaining pertinent to individual traditions of storytelling which also create expectations about the way action will progress (1985: 149). Using this feature as context for the points raised so far, it becomes obvious that the CS can function as a central axis of features that are lifelike, to use the words of Bordwell, around which the spectator will gradually build the worldmaking of the entire CU in a way that will heavily draw on past personal experiences both of one’s life as well as previous exposure to narrative structural normalities.

The value of coherence conceived in such a way is beneficial for the quality of the fictional world itself, but it does not need to be limited to the strict rules or narrative composition only. Walters has commented on the fact that artificial universes, as they are composed in fantasy movies in particular, are made of things that spectators normally do not know and cannot recognize, but “[t]he make-believe must still make sense” (2011: 113). He also notes that our sense of the overall aesthetic success of such a movie depends on elements composed with “coherent relationships” to one another, in a process where a creatively bold worldmaking should aim towards “significance and meaning” (2011: 113). Walters comments on George Wilson’s account, who approaches coherence as a more structure-oriented factor. Wilson refers to the macrostructure particularly of the classical film narration as an agent of “global reliability” that connects shots both to one another and to the overall flow of a storyline in a movie as a kind of “promise to depict a set of events, acts and situations which will turn out to have an internal explanatory coherence” (1986: 40).³ Based on Wilson’s account, Walters explains that promise as the kind of coherence that exceeds simple attention to micro-structural narrative details, eventually being based on a much wider “framing logic”, an overarching fictional world within which the events and actions shown in the movie make sense and become meaningful. This ensures a kind of coherence in which “the particular and the general become inextricably related” (Walters 2011: 114).

It has been stressed so far that the CS is a concept that includes narrative structure but stretches beyond its limits; still, the function of narrative within the CS in terms of providing internal coherence, as described by Wilson, reflects the same role for the entire CS. In fact, the macrostructure of a film narrative is based on the internal consistency of the same individual social, behavioural and, generally speaking, functional elements that constitute the concept of the CS. Narrative structure includes, among other things, a specific assembly and ordering of such elements in a way that the storyline pro-

³ Emphasis in the original.

gresses in a satisfactory manner. What is also important to mention here is that the inclusion of these familiar constituent elements in a narrative does not automatically guarantee coherence; they indeed establish credibility, but their success depends on the overall manipulation of the storyline by writers and moviemakers. This probably explains the prominence that Wilson assigns specifically to classical narrative structure; the clear delineation of the latter can normally minimize the chances of making mistakes that would fragment the infrastructure of a movie, undermine the credibility of the CS, and thus affect the coherence of the entire movie, as well as contaminate the entire franchise. As such, it serves as a very accurate example of the binding potentials of the CS as a whole.

Local vs. universal coherence

So far it has been pointed out that both the screened and the non-screened elements of the CU contribute to establishing coherent worldmaking in a movie, with emphasis on the CS specifically. Concerning the contribution of non-screened elements, a common explanation that has been given over time attributes their usability to functions of gap-filling that spectators perform during movie-watching. Nevertheless, the distance that has been widening between reality and movies with the increasing production of visually excessive synthetic worldmaking seems to dictate a revision of the concept of gap-filling so that it reflects more adequately the present situation.

At the core of this revision is the realization that gap-filling has two forms: it should be differently understood on one hand in terms of the perception of spectators during movie watching, and on the other in terms of the cinema industry and the position of a movie product within it. This distinction is remotely related to the one Jiří Koten used in order to separate story worlds from fictional worlds respectively (2010: 47). Ryan explains Koten's distinction essentially as one between the cognitive handling of that world, i.e. how it is "constructed and »simulated«" inside the minds of the audience, and the philosophical approach to the actual ontology of a fictional world (2014: 31-32). In the context of the present discussion, this distinction ultimately creates a difference between worldmaking as a cognitive process vs. a literary or creative concept. Within this dual context, the effort towards coherence is also slightly redefined. On one hand, it maintains its general etymology-based meaning which connects it to concepts of unity and completion, but on the other it denotes different understanding of gap-filling in each case.

Gap-filling as a cognitive process seems to be rather far from any assumption that spectators recreate the narrative in their minds in a certain

detail. Although such an assumption would answer several issues concerning movie comprehension, it is probably not accurate. Julian Hochberg and Virginia Brooks have demonstrated that, due to the cognitive capabilities of the human mind, whatever mental formation spectators make of the narrative inside their minds will have nothing to do with what they see on screen either in physical terms or in terms of appearance. In fact, what the authors note as the source of previous knowledge that spectators utilise in movie comprehension is much more and much wider than simply overall story structure, thus stretching as wide as the genre, the characteristics of the medium, and even facets of life itself (Hochberg & Brooks 1996: 271). Humans encounter movie events like they do with the real world, i.e. by consulting “major plan schemas”⁴ that codify the world as a set of intentions, normally manifested in purposeful motion; they will also generally prioritize those schemas over anything minor that does not immediately reflect that kind of overarching knowledge, effectively keeping only a fragment of information from the physical and social environment which will be all they need in order to respond to it (Hochberg & Brooks 1996: 267). In the same manner, while watching movies the cognitive functions of spectators are more preoccupied with local comprehensibility; if there is no noticeable inconsistency, spectators neither fill any non-screened narrative gaps with specific information nor consult any overall narrative structure for that purpose (Hochberg & Brooks 2007: 388). Surprisingly, this limitation is actually what makes coherence possible in CGI worldmaking: if the flow of the movie only needs to be locally comprehensible, spectators will only draw meaning from these wide and non-specific “major plan schemas” and this wider reservoir of abstract knowledge will sew together the pieces of CU which are actually screened. Using this schematic background instead of the strict and detailed narrative structure, the CU rises as a relatively coherent and thus credible fictional world. As a cognitive process, therefore, gap-filling simply means anchoring the CS and the CW to previous knowledge. After all, gap-filling would not be able to mentally reproduce elements that are entirely unknown to spectators, nor can any CU be recreated in every detail, either physically and visually, or mentally.

Gap-filling as a literary or creative notion, on the other hand, is a different case altogether. In the context of worldmaking as a process of creating a fictional world, circulating it to the audience and further building on it within a franchise, gap-filling is essentially the ways in which the success and popular demand of a movie trigger the marketing of additional prod-

⁴ The authors use the term as used in the work of Lichtenstein and Brewer (1980) who conducted experiments of viewers identifying actors' purposeful actions.

ucts that expand its original content. When successful movies expand into wider franchises, apart from sequels and prequels, a number of other pop culture items such as games, toys, novels, TV series, theme parks etc. contribute to the constant worldmaking of the original. This normally happens with successful fantasy or science fiction movies, especially now that CGI makes this expansion across media immensely easier and more accessible, and wears out only when the fan base drops under a certain threshold that renders the profits of the franchise non-viable. Until that happens, though, the world-building practice of a movie can in fact expand to such a degree that it becomes a highly complex network of official and unofficial products and information connected to the original world of the movie. Considered in terms of gap-filling, therefore, the franchise is a potentially significant volume of products containing information that presumably comes from the world of the original movie and is attached to it in some way. Apart from adding new elements to the CU for creative purposes, this new information often also resolves inconsistencies in it, thus filling in conspicuous or problematic gaps that undermine its coherence.

Although it is normal for studios to follow the canon for franchises, i.e. the officially sanctioned body of information about the fictional world which is also normally used in franchise products, the lore of that world is significantly wider, especially in successful franchises. Most of the information contained in the lore is not even screened, nor has much chance of ever being screened. Both canon and fan-made material are usually included in the lore, which might end up comprising a very complicated, at times even self-contradictory network of elements, which, nonetheless, often provide inspiration or material for the further expansion of the franchise. In terms of the wider CU, as defined here, the lore is included in it and subordinate to it in terms of content. The reason is that the CU is a non-finite realm that contains both the existing material as well as all the possibilities that may occur or exist within the fictional world, thus allowing the lore to expand indefinitely inside it. Any new piece of information in the worldmaking, therefore, draws on the possibilities of the CU, and is eventually realized as lore, and perhaps even as canon if it is embraced by the official creators or owners of the franchise.

This version of gap-filling, therefore, means introducing information to a cinematic universe that will contribute to its coherence when spectators come in contact with the fictional world of a movie. Such information is normally introduced while the franchise is alive or trending; this essentially means that this kind of literary or creative gap-filling is a constant process that takes place even long after the original movie is released and potentially through various media forms. Both the canon and the lore, each in its own

way, aim at enhancing the coherence of the original CU for the sake of drawing inside synthetic worlds all spectators of various levels of fan-based loyalty to the franchise. From a certain point onwards, a specific movie might even be reduced to only a fraction, not necessarily the most important one, of the wider world of a franchise.

The many faces of coherent worldmaking

Coherent worldmaking may not be a chimeric aspiration of movie makers, given the technology currently available, but may in fact prove a rather elusive concept to theorise. The concepts of the Cinematic Story, Cinematic World and Cinematic Universe can provide a framework to comprehend world-building practices, especially in the context of digital technology which has radically transformed the rules of creation and production within the industry. Following the comparison of the two types of gap-filling discussed earlier, i.e. the cognitive and the creative processes, and the way each of them contributes to the notion of coherent worldmaking, it becomes obvious that coherence should be approached both as a process of the mind and as an industry-related practice. Still, it seems equally problematic to diminishing the function or importance of each and to confuse them with each other. Attempts to explore viewer experience should consider both, as long as their essential differences are acknowledged: the former is a local experience of a fictional world, based on cognitive operations that take place during movie watching, whereas the latter refers to the wide, creative and practically unrestrained practice of worldmaking by creators of a movie or franchise.

Coherence is thus best understood as a multi-faceted concept. Much more than a simple experience of movie-watching, it is the collective result of a number of factors: careful worldmaking and attention to detail in terms of the way the CS and the CW of a movie will be first set up and further developed later; the cognitive operations of spectators that compensate for meanings that will help them with real-time comprehension; and the contribution of pre- or post-release world-building through the establishment of the franchise, which will expand upon the worldmaking of an original movie. The concept of Cinematic Universe and its constituents can prove to be a helpful tool in comprehending and acknowledging the nature of fictional worlds in cinema, especially now that digital technology gradually shrinks the gap between the experience of fictional worlds and that of the real world.

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