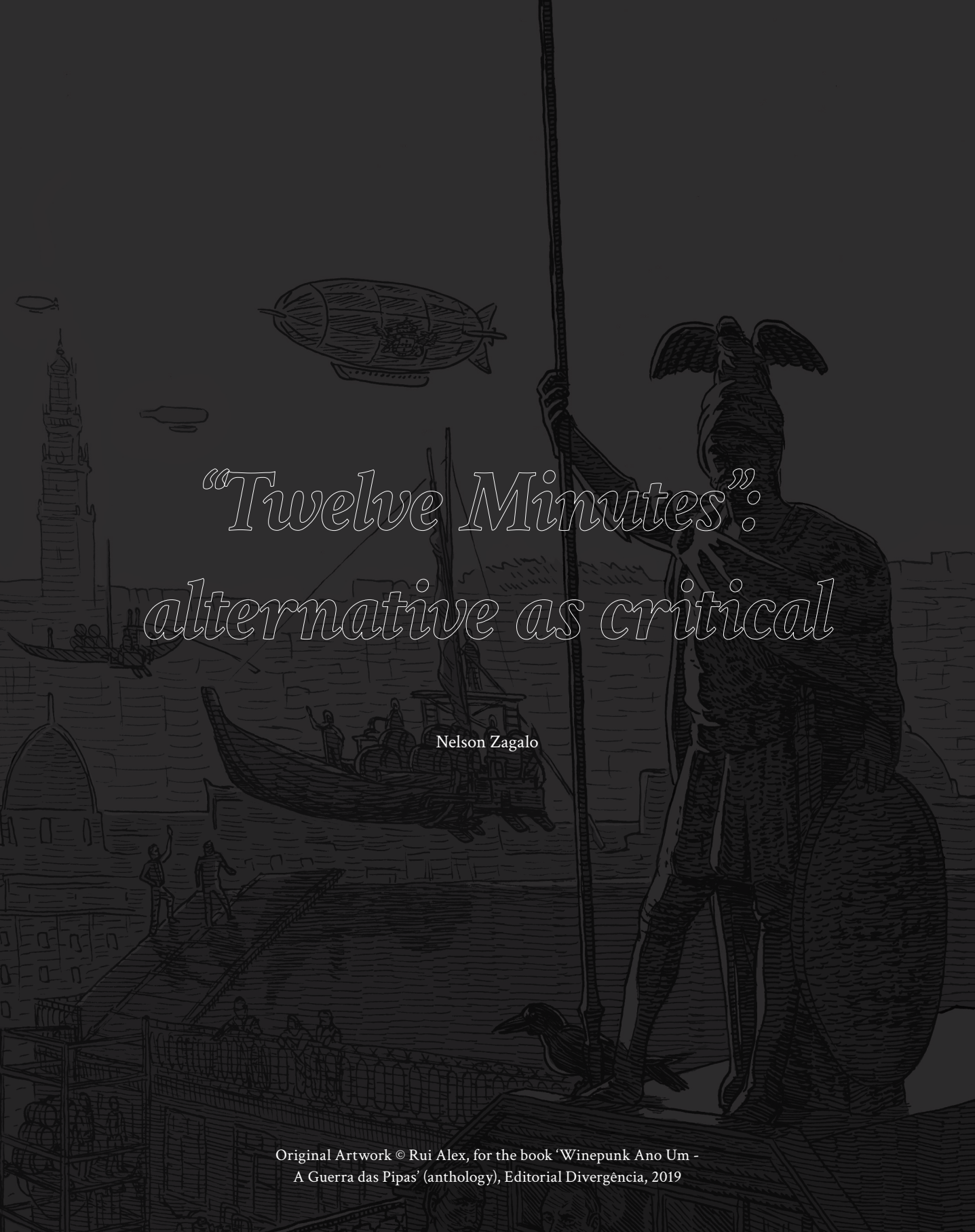

"Twelve Minutes": alternative as critical

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Abstract. Assuming that the process of storytelling is one of the primary means used to create meaning from the reality around us, we will use the interactive narrative game, “Twelve Minutes” (2021), created by Luis Antonio and produced by Annapurna Interactive, to demonstrate how alternative histories work around our critical thinking processes to create meaning.

Keywords: Critical Thinking, Interactive Storytelling, Alternative History, Twelve Minutes

Essence of Cognitive Nature

Our everyday life is saturated with information, data that enters us through our sensory systems and is then analyzed so that it can be discarded or retained. This whole process tends to take place through what is called "mental simulation" [1], a process that allows us to recreate inside our minds the information presented but recreated from our own model of the world. We use our past experience and acquired knowledge to build a world of inferences in which we project the most recent information and try to make sense of it.

Instead of projecting, we can talk about translation, the translation of an external general idea into an internal individual idea. It is a process very close to the so-called metaphors that we use when we need to explain concepts to people who do not know them. The metaphor works as a comparison between two distinct elements and allows us to get to know one through the other, that is, it works by bringing ideas together.

Examples such as "time is money" or "life is a highway", allow in an extremely simple way to join two completely different ideas, offering the subject the possibility to join the characteristics of a known and concrete to another unknown and abstract. In this way, the metaphor allows the sender to make explicit what he or she effectively wants to say and simultaneously do it in a way that is shared with the receiver. On the other hand, when we don't have someone to produce this metaphor for us, we create them ourselves. When we look at the sea and see tranquility, reliving past moments of relaxation on the beach, or when we see someone cutting some unknown object and by comparing the movements made with others made by us in the past on different types of objects, we are able to infer whether the material of the object is hard or soft.

From this short summary we realize that the essence of our cognitive machine is based on a pattern of continuous processes of comparison. In general, we tend to think that reasoning processes are much more complex. However, all the processes involved in rationalizing something result in a final comparative process, without which we cannot derive meaning. Both the trial-and-error process and the experimental process with hypotheses require a comparison between what one has found and what one knew before, and it is from this process that the resolution is born.

Comparison Process and "Twelve Minutes"

A simple way to understand the scope of the mental mechanics of comparison is through the analysis of the social relationship. We think of ourselves as individual beings, but we can only exist as part of a social fabric. We are born unable to survive alone, and we always live as part of a larger social body. The exceptions of those who have lived in isolation tend to show a fragmentation of the Self, not the other way around [2]. We continually need human peers for the realization of social comparison [3, 4] so that we can grow and evolve. Seeking our individuality, we only achieve it to the extent that we extract difference from comparison. In other words, we learn through imitation and copy, and we evolve through difference (see figure 1).

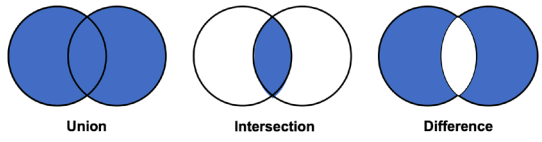

Figure 1 – Difference helps us understand what we're missing

This comparative process is not only the basis of metaphor and our social relationships, it is the concrete basis of life that is formed from the

joining of 2 cells that each offer half of their world for the new to emerge. Of course, in this process of cell fusion, in which 23 chromosomes are imported from the father and 23 from the mother, a comparative process of assimilation occurs, fertilization, which allows for the joining of the chromosomes and formation of a zygote with 46 chromosomes, or its rejection and non-fertilization [5]. This comparative process is with us always, it allows us to be born, live, consume, dream, and even die, since at all stages decisions have to be made, for which the comparison between what one has and what one is supposed to have, is required.

In "Twelve Minutes", we are introduced into a small storyworld that is formed by a small space, a small T1, and an even smaller window of time, 12 minutes. We arrive home, our wife is already there, after a couple of arguments someone rings the door, but this someone turns out to be a person capable of ending our lives, which ends the time window. Every time we, woman or man, die, we go back to the beginning.

This narrative process of stories enclosed in time cycles is well known from famous works like "Groundhog Day" (1993), or more recently "'Edge of Tomorrow" (2014). In all these cases, the story takes us by the hand showing what would have happened if the decisions had been different at each moment. If we hadn't had dessert, if we hadn't turned on the radio, if we hadn't picked up the knife, if we hadn't opened the door, if we hadn't said we were home, etc.

Since "Twelve Minutes" is a game, an interactive story, the process of taking the reader by the hand is subverted, since although we have a story unfolding, it actually progresses only if the reader becomes active. It is not enough to observe the protagonists' choices and wait to see the results of those choices at each cycle. To be frustrated or pleased because they have moved forward or hit a dead end. We must truly act upon the fictional world by taking concrete action, but more complex than that, we must reflect on the choices we want to make.

So, to play "Twelve Minutes" we are forced to produce a whole mental model of the scenario and events, and mentally simulate possible variations of events, in order to find hypotheses worth testing in each time cycle. So, I might think that closing the apartment door with a double lock might prevent the murderer from entering, or that by taking a large knife from the kitchen I might be able to defend us. But I might also think that if I hide in the living room closet, my wife won't realize that I'm home, and I might observe the interaction between her and the alleged killer in order to see if there is any previous relationship that I don't know about.

Figure 2: two different approaches to playing the variables give us variable endings to the temporal loops.

Comparison Processes, Education and Other Ideas

Comparative processes help us understand what changes each time we repeat an action with variation, and we gradually learn about how to act on the story, about the actions that produce variation and those that don't, about those that move in the direction we want, and those that pull us back. For these comparisons we use not only the scenario presented, but all our past experiences - movies, books, real events - that we put side by side with what is happening in the game, and from the intersection come ideas for trying out different actions, for introducing variations in the acting process.

The intersection shows us what is common and opens a whole world of different hypotheses for the comparative scenario we are using in our mind (see figure 1). Therefore, something that could be extremely complex, apparently inventing different ways to act within the game, becomes a simple process of trial and error, in which we experiment with the variables we have in our inner repertoire. If the comparative process acts in the simplification of the so-called critical thinking, in fact this simplicity only happens if in the player's mind there are multiple scenarios that can be compared. This tells us that critical thinking cannot operate in a vacuum [6, 7]. Without knowledge of multiple nearby scenarios, new intersections of ideas are not generated.

This knocks down some of the much-vaunted ideas about the educational needs of the 21st century, which advocate a move from content knowledge-based to the so-called learning skills as if the processes of mind simulation could run on abstract algorithms. Our brain is far superior to the idea of having a potato slicer, where the algorithm of its operation allows us to vary the size or speed of the cut, or the shape of the grid. In this process, innovation is trapped by the reach of the algorithm, and can only happen by chance, that is, on a day when changing the variables introduces some error that ends up creating a new process of cutting potatoes.

Our brain doesn't work based on mathematical algorithms; it works on the basis of comparisons. Planning new scenarios does not arise from varying the size or position of a cog in the algorithm. Comparisons summon previous approximations and look there for the difference. The mechanism, in the abstract, is far simpler than the generality of the algorithms that our machines carry. However, the abstract is irrelevant here, because for this process to work, I must get down to the concrete, compare only what is comparable, and for that I need to have a very good base of knowledge, culture, about potentially close scenarios, without which I will not be prepared to deal with the immense variability of the world we live in.

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