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# ¡Juéguelo!: An Interactive Compilation of Traditional Colombian Games\*

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**Abstract.** Traditional Colombian games are slowly being lost to time due to a waning oral tradition and the popularization of modern media. We seek to maintain and propagate these ludic manifestations by means of a video game, made possible through an engineering team effort. Each traditional game is represented in a microgame that contains abstracted and transformed characteristics from the source material, upholding its crux nevertheless. An MVP (minimum viable product) is disclosed amid early development stages to gather valuable feedback. The game’s implementation is then continued based on the collected comments, suggestions, and data.

**Keywords:** Traditional games · Microgames · Oral tradition · Abstraction · Serious games.

## 1 Motivation

Through the development of a video game and in the context of an engineering project, we seek to persist and communicate Colombian ludic traditions not only to those who don’t know about them, but also to those who want to experience them again. We believe that a video game is the best approach to achieve this goal, since their interactive nature allows the player to experience to a certain degree what it is like to have the real involvement. This is unachievable with written or recorded media. Likewise, we share a fascination for video game development and we would like to generate a product that, besides being fun, accomplishes our communicative goals.

### 1.1 Problem Statement

Oral tradition has been a determining factor for the preservation of traditional games, since they cannot be found in many documents or books and cannot be bought in conventional game or toy stores [1]. However, in recent years, this tradition is rapidly being lost. Bañol [2], warns that due to globalizing tendencies

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and the surge of new mass media, attention has been deviated to other forms of entertainment and in consequence, cultural transmission between generations has been diminishing. Having this in mind, it is of great importance to adapt traditional ludic models to ways compatible with new media, in such a way that their cultural preservation is encouraged and facilitated.

## 1.2 Goals

The project's primary goal is to communicate and preserve some of the various traditional games of Colombian culture and the way they are played through the narrative and playability constructed in a video game. More specific goals include: design an organic narrative surrounding Colombian tradition that captivates the player in such a way they obtain the complete game experience, encourage the players to challenge themselves through a global leader board, create a playability that generates fluidity between each component of the game through the abstraction of the most relevant aspects of traditional Colombian games, create an immersive game environment true to Colombian culture with the use of art and music and build a game experience accessible to a diverse audience, regardless of age, experience and context.

## 2 Game experience

For the purpose of this section, it is necessary to know the following definitions: a mini game is a small, self-contained game that focuses on a defined theme and, in most cases, takes a small amount of time to complete [3]. With this in mind, a microgame is defined as a mini game characterized by having very simple mechanics and lasting a considerably small amount of time (usually a few seconds). Note that microgames, despite being self-contained experiences, are rarely found individually thanks to their simplicity and brevity. *WarioWare* is a well known example of such collections, and a significant influence on how we design microgames. Since the term "mini game" includes a great variety of experiences with variable complexity, it is important to categorize microgames as their own subset.

### 2.1 Abstraction

Traditional games, like every game, are complex models that are governed under numerous rules (each with innumerable distinctions and regional variants) and that can be affected by several stochastic variables. Likewise, computational engines present their own restrictions. In addition, traditional games can range from a simple handheld toy to a national sport. With that being said, it is necessary to abstract each traditional game to include it in the project. Wolf [4] defines abstraction as the action of simplifying and reducing something in such a way that its essential components and basic forms are maintained. The most important characteristics and mechanics of each game are decomposed in

atomic components and implemented in objects that exist in a two-dimensional environment.

For each microgame included in *¡Juéguelo!*, an abstraction process was made. In these, key aspects of the corresponding traditional game were taken into account: game rules, ways to play the game, used material, etc. The final goal of this process is to generate a two-dimensional microgame that maintains the essence of the original game.

## 2.2 Game structure

*¡Juéguelo!* is composed of two main game modes: a story campaign and a game gallery.

**Story campaign** In order to encourage the player to experience the game thoroughly, a game mode based on a simple, yet riveting narrative was implemented. The narrative is divided in three acts, in which the player will start out as a novice to traditional games and build their skills up to become the grand master. Concerning this, the microgames in each act are notably more difficult than the last. Due to the segmented nature of this mode, each act serves as an appetizer for the next one, in such a way that the player remains entertained.

Each act involves a series of pseudorandomly selected microgames, which are sequentially presented to the player, and a finite amount of life points. A life point is taken each time the player loses at a microgame. If the player manages to complete a certain number of microgames without depleting all life points, they will complete the act and gain access to the next one, with exception of the third act. In this final act, the player will instead be given the option to keep playing at an incremental difficulty, in order to achieve the highest score possible. These scores will be ranked and displayed in a global leaderboard.



**Fig. 1.** Act two of the story campaign

**Game Gallery** In this section, the player can freely select each of the traditional Colombian games implemented in *¡Juéguelo!* in order to obtain detailed information about the selected game. The information shown will be: alternative

names, game overview, demonstrative video and how to play it both in reality and in its abstraction as a microgame (figure 4). Additionally, the player will be able to play the selected game in any of its three difficulties (easy, medium and difficult).

It should be noted that, both in story campaign and in the game gallery the player can pause the microgame to access additional information about the microgame that is currently paused or to return to the main menu.



**Fig. 2.** Game Gallery

### 2.3 Aesthetics

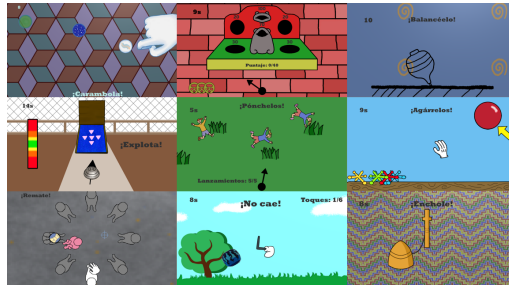
The art of *¡Juéguelo!* was made alongside the development of each microgame by separate members of the team. This way, every microgame has a distinctive and independent identity. A single member of the team illustrated the scenes that narrate the events in story campaign in order to keep narrative and aesthetic consistency, as well as to showcase certain aspects of Colombian culture. It is worth noting that the game's development was an engineering based project, ergo art was not a main focus. Since this project revolves around Colombian tradition, it is relevant to complement it with local music from all around the country. This music <sup>1</sup> must also uphold the dynamism of the video game events.

### 2.4 Microgames

**Coca** The *Coca* is a wooden or plastic toy that consists of a handle attached to a perforated sphere or barrel through a string. To win this microgame, the player must insert the barrel in the handle by moving the mouse before the time expires.

**Fuchi** This game consists of performing tricks with a hacky sack without dropping it to the ground. In the microgame, the player must prevent the ball from touching the ground by clicking on the ball. In order to win, it must be kicked at least 6 times before time runs out.

<sup>1</sup> The music was composed and produced by fellow student Alejandro Cuevas.



**Fig. 3.** Microgames

**Jackses** This game is played using pieces called *Jackses*, a ball and a flat surface. In this microgame, the player shall drop the ball by clicking on it and collect the pieces before the ball bounces for the second time. Once all the pieces are collected, the player must grab the ball by clicking on it. All this needs to be done before the time expires.

**La Olla** *La Olla* is a game for a large group of players that is played with a light ball. In the microgame, the player will control one on-screen character, and must spike the ball when prompted in such a way that it strikes the character in the middle.

**Piquis** *Piquis* is one of the names given to marbles in Colombia. In order to win at the microgame, the player must aim and thrust a marble so that all marbles in screen are struck at least once before time runs out.

**Rana** This game is played with a *Rana* (frog) table and metallic rings. In this microgame, the player must throw the rings to insert them in one of the table's openings. To throw the ring, the player sets the direction and force using the displayed meters. Victory is given to the player if they score enough points in time and within the given number of throws.

**Tejo** *Tejo* is a sport that consists of throwing a metal disc onto clay-filled boxes to make a gunpowder envelope explode. In the microgame, the disc must be thrown by clicking on the arrow to set the direction and then the strength must be selected by clicking on the screen.

**Trompo** A *trompo* is a traditional top, often made of wood. In the microgame, the player must prevent the toy from toppling over by clicking on either side to apply torque. The player will win if the top remains upright for the whole duration of the microgame.

**Yermis** This team-based game is played using bottle caps, a ball and in some cases bats. The player must throw the ball towards the bottle cap tower. If the tower is knocked down, the player must hit the characters shown within a limited number of throws. Otherwise, the player must evade the balls thrown at them using the mouse.

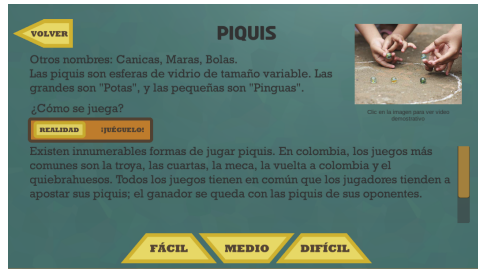


Fig. 4. Microgame information

### 3 Our solution

There are multiple video games that are related to assorted Colombian aspects such as history and geography. However, there is a scarce amount of video games that communicate traditional ludic models. The only video game that explores traditional Colombian games is *Virtual Tejo*[5], which is focused on a singular traditional game (*tejo*).

To the extent of our knowledge, our project is the first video game to represent and cluster multiple traditional Colombian games in the same digital experience, some of which have never been represented in this way before. In addition, a significant effort was made to channel and streamline the way such greatly different games are played in reality in order for them to be playable solely with a mouse.

#### 3.1 Results

A demo of the game was publicly released as well as a survey to collect player feedback. In the course of two weeks, approximately 80 game sessions were recorded. Information of each game session was persisted in a database to analyze the players' performance with the intention to balance difficulty and improve the game experience. The feedback received through the survey was mostly positive and suggestions were taken into account for the development of the full release. We have recorded over 300 game sessions<sup>2</sup> since. We have also received comments from players stating their unawareness about certain games or relevant aspects and how they have learned more about them by playing *¡Juéguelo!*.

<sup>2</sup> as of 20 of June, 2021.



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