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Since the 15th Century, the oxymoron *serio ludere* has suggested the idea of combining the concepts of games and *serious subjects*. Humanist literature would extensively use this concept to denounce all kinds of social problems. Then, until the development of computing, the armies of the world would exploit this concept through *war games*, which are ludic simulations for developing new tactics and training officers\(^1\). The modern concept of the *serious game* dates back to 2001–2002, with the video game *America’s Army*\(^2\), developed for the US military to simulate training exercises. But almost simultaneously, the notion of the *serious game* would be popularized by its application to the educational world. Today, the title *serious game* refers to such diversity in terms of support, concepts, intentions, approaches and target audiences that it is difficult, if not impossible, to confine this concept into an exhaustive definition. One of the least restrictive definitions refers to a *computer application that combines serious intent, education-oriented, and that is informative, communicative, marketing, ideological, or for training, with recreational parameters issued from video games or computer simulations*.

Karen Chabriac, in her review of all the attempts of definition of serious games\(^3\), concludes that the most synthetic is that of [MIC 06]: *any type of game whose purpose is other than mere entertainment*.

Due to the diversity of themes, objectives and approaches, there are numerous attempts regarding the classification of “serious games”, depending on their purpose (advertising, recreational–educational, military, simulation, prevention, training, rehabilitation, etc.), or even depending on the *serious* function associated with the

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2 http://en.wikipedia.org/wiki/America’s_Army.
ludic basis (informative broadcast, educational, persuasive, military, etc.), provide training to improve the physical or cognitive potential of players, promote the exchange of data between players (or between the designer of the game and players), and/or the associated market sector (the type of public targeted). There is even an interactive site dedicated to the research of serious games based on several simultaneous criteria, divided into three categories: intention, market and public⁴.

The general idea is that there are only two broad categories of games: ludic games designed for entertainment and serious games in which the player learns. In fact, in parallel to this concept, a third category of games has been emerging for slightly more than a decade, the Games With A Purpose (GWAPs), in which it is the player who teaches something to the machine. The concept of GWAPs is based on the idea of harnessing human skills for purposes of research and/or data production, whether destined to support programs to progress in their understanding of the world or more simply to use home computers to increase the computing power at the service of a research project. In either case, the ludic component is essential to motivate the public. The applications are numerous and the sector is growing. The concern is to exploit the available brain time (available and not only willing, but enthusiast if possible) to perform tasks that machines are (still) unable to do. A non-negligible or even crucial aspect is that this type of games, directed toward the production of all kinds of data, makes it possible to, therefore, use the creativity, the imagination, the knowledge and the know-how of hundreds or even thousands of users at a lower cost. It should be noted that unlike the AMT system⁵ (resource collection tool that uses crowdsourcing and offers a derisory remuneration as well as conditions not complying with the French labor law) the principle of GWAP does not raise any ethical problem, as long as it remains free and does not offer prizes that look like disguised salaries [SAG 11].

Originally, at the formalization of the concept of GWAP, there were CAPTCHAs, which were invented by Luis Von Ahn [AHN 06a], an American academic: these are small tests based on the deciphering and the input of a sequence of characters, which are employed to differentiate a human from a computer on the Internet, and thus to prevent spam, phishing or any other malicious activity by automatic means. Luis Von Ahn realized that the 10 s spent by a human to decipher a CAPTCHA (therefore to do something which a computer does not know how to do) could be usefully employed. He then created ReCAPTCHA: from now on, when a captcha is decrypted, not only does it identify the user as a human being, but it also helps to digitize books by deciphering sequences of characters that the optical character recognition (OCR) is unable to decipher. The principle of the GWAP was born, and will be illustrated by ESP GAME [AHN 04]: the father of CAPTCHAs invented a game that consists of presenting the same image to two players who will score points

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⁵ Amazon Mechanical Turk