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ACT - A NEW GAME-BASED METHODOLOGY FOR ANTI-CORRUPTION TRAINING

Vincenzo Petruzzi[1]
Marco Amicucci[2]

[1]Instructional Designer free lance
[2]Amicucci Formazione

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Corruption is a powerful impediment to economic and social evolution, and training is one of the most important tools for helping organisations stem and combat the spread of this phenomenon.
Current training available in the anticorruption field focuses on conveying information relating to current legislation. However, scientific evidence makes it clear that corruption is a psychological and social phenomenon as well and shows that individuals unconsciously adopt tactics to "rationalize" and hence to accept and justify corrupt behaviour.
Explaining these mechanisms can contribute effectively to promoting a new awareness among citizens that can transform their perception of corruption and help them recognise and change their own attitudes and behaviours.
When, as in this case, it is necessary to make a deep but non-coercive impact on people's attitudes and beliefs and generate change in individual actions and performance, the most powerful tool we have is certainly games. For

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these reasons, the Gamification app can make a valuable contribution as a potent catalyst for change. This article will describe ACT (Anti-Corruption Training): a new game-based methodology for anticorruption training.

1 Introduction

Corruption generically indicates the behaviour of an individual who, in exchange for money or other profits and/or benefits not owed to him, acts against his own duties and obligations. Today this topic is in all the headlines and on the political agenda, including in Italy.

The international NGO Transparency International[1] puts **Italy in 69th** place among 174 countries in the world ranking of perceived corruption, the worst in all of the European Union.

To combat the gradual spread and institutionalization of this disturbing phenomenon, **Law 190/2012** setting "Provisions for the prevention and suppression of corruption and illegality in the public administration" was passed. One of the most important measures taken by the law is training the civil servants called upon to work in those sectors where there is a greater risk that corruption-related crimes will be committed.

The National Anticorruption Plan[2] also stresses **the importance of training** by calling it "crucially important in preventing corruption" by spreading ethical values and principles of ethically and legally appropriate behaviour.

In compliance with the law's provisions, the public administrations have begun anticorruption training programmes, which are increasingly being offered in the form of **e-learning**.

However, beyond the mandatory nature of this type of training, the law says nothing specific in relation to the content and instructional programme. Whilst current anticorruption training seems to be focused primarily on providing information about the legal provisions (considering the fact that when citizens become familiar with the laws they can avoid engaging in unlawful behaviour and being subjected to the relative sanctions), a worthwhile understanding has been gained from many scientific studies investigating and analysing the roots of this phenomenon.

2 Psychological and Social Roots of Corruption

Normally we tend to think of corruption as something distant from and external to us, but that is not in fact how it is because "people seem more recruitable into corrupt practices than we would think" (Darley, 2005).

Corruption often takes root in unconscious habits and attitudes, to the extent

[1] http://www.transparency.org/cpi2014/results

[2] Approved by the National Anti-Corruption Authority (ANAC) on 11 September 2013

that they become invisible to the person acting them out, leading to **a de-responsibilization that projects blame outside oneself**. People who have engaged in corrupt acts excuse their actions to themselves by viewing their crimes as non-criminal, justified, or part of a situation which they do not control as Tony Bishop, President of the Association of Certified Fraud Examiners, pointed out.

One of the most typical and at the same time problematic aspects of corruption is that people who engage in such acts are usually "upstanding members of the community, caring parents, and givers to charities - clearly different from the image of a typical criminal" (Anand, Ashforth & Joshi, 2005). How do these individuals manage to create such a strong dissociation and take on an attitude we might almost say is bipolar?

Scientific research in this area has shown the presence of **rationalizing tactics** (Anand & Ashforth, 2003), i.e., techniques by which someone engaging in fraudulent behaviour is able to provide a rational motivation for it and, hence, to accept and justify it, which makes it difficult to label the conduct criminal and lays the foundation for a repetition of the behaviour.

Table 1
CORRUPTION RATIONALIZING TACTICS

Tactic	Description
Denial of responsibility	Individuals involved in corruption often tend to state they had no other choice as its hand is guided by a greater will that cannot be resisted.
Denial of injury	The individuals convince themselves that they are not harming anyone and that their conduct therefore does not have such negative consequences. For example, someone who pays to fix a tender is fraudulently appropriating public funds (and hence causing injury to every citizen), but he feels that it is not like stealing from someone's pocket. The *psychological distance* minimises the sense of guilt, especially if the victim is depersonalized or emotionally and psychologically distant from the person performing the unlawful act.
Denial of victim	People engaging in fraudulent conduct justify themselves by stating that the victim is not a victim because he deserved that treatment. Taking advantage of the victim thus becomes a form of revenge, and those who engage in unlawful conduct perceive themselves as modern Robin Hoods.
Condemn the condemner	If the person condemning me is illegitimate, then his arguments are illegitimate and have no value. For example: if the law is perceived as vague or too complex or ambiguous, or excessively stringent or exploitable, then violating it is not a behaviour that violates ethics.
Selective social comparison	Once corrupt acts have cast the individuals committing them in a negative light, these individuals are motivated to find individuals who are more corrupt than they in order to demonstrate that their conduct is not all that serious. In this case they use comparisons to reduce their own responsibility, taking a relative stand rather than absolute or objective.

Tactic	Description
Appeal to higher loyalties	Some individuals acknowledge that their conduct is fraudulent, but they justify their corrupt behaviour based on a higher value. Imagine an individual who becomes aware of corrupt behaviour of a colleague with whom he has a friendly, trusting relationship. It is unlikely he will report the behaviour and might even (if necessary) help him in the name of their friendship.
Metaphor of ledger[3]	The de-responsibilization mechanism is generated judging the act negative in relation to all positive acts performed previously. Hence, undue appropriation that harms one's own organization may become acceptable to someone if that person considers the dozens of hours of overtime he worked without pay. In this case the individual views the undue benefit acquired as compensation for other disadvantages suffered at another time.

The survival of corruption phenomena depends on to what extent and how these rationalizing tactics are adopted, but it also depends just as much on **socialization processes** used by members of a group to get new arrivals to adopt the deviant behaviours. Indeed, when a newcomer enters a group where corrupt practices are widespread, he experiences a strong sense of dissonance. This dissonance keeps the newcomer away from improper conduct, but the group adopts socializing tactics to *infect* the newcomers and enable their deviant behaviours to survive.

One of the most important factors that abet rationalizing and socializing is the use of **euphemistic language**, which enables individuals engaging in corruption to describe their acts in ways that make them appear inoffensive (Strano, 2003).

Experimental studies have demonstrated the disinhibiting power of euphemistic language (Diener *et al.*, 1975).

3 A New Anticorruption Methodology

The scientific studies reviewed make it clear that, by adopting rationalizing and socializing tactics, and through the use of euphemistic language, the corrupt individual tends not to perceive himself as such and to consider his own conduct as always lawful. Moreover, understanding the rules and punishments established by law for unlawful conduct is not sufficient to halt the onset of certain dynamics within his own mind or in his relations with other individuals, which then take the form of fraudulent behaviour.

Knowledge of the laws is an essential skill, but it is only the basis for a broader approach that should extend beyond established legislation and explain the deeper mechanisms that set off corrupt behaviour and the causes giving rise to it so as to have an impact not just after the fact with laws (through repression) but also before the fact (through prevention). Revealing how the unconscious

[3] A ledger is the master book in which a company's revenues and expenditures are recorded.

tactics that enable and feed corruption work can effectively contribute towards promoting a new understanding among citizens that will transform their perception of the phenomenon and help guide them towards virtuous behaviour.

Based on these considerations, anticorruption training should include and incorporate two distinct but complementary pedagogical objectives: understanding of the legislation (knowing) and the ability to recognise and change one's own attitudes and behaviours (knowing how to be).

When, as in this case, it is necessary to make a **deep but non-coercive impact on people's attitudes and beliefs and generate change in individual actions and performance**, the most powerful tool we have is certainly games. In fact, Gamification can be viewed as a tool for designing behaviours (Burke, 2012).

This approach is reflected in a growing number of applications that use gaming dynamics to guide and improve the behaviour of individuals.

One of the most virtuous examples is in the field of eco-sustainability: "One Small Act[4]" is a social network that helps people to perform lots of little everyday green activities (such as saving electricity, making less use of vehicles, recycling) which, combined, can help save the planet. People are often unaware of the great benefits that even small actions can have, so they are not sufficiently motivated. This free online and mobile platform provides users with new tips on how to contribute: for each project in which users participate, the system provides a list of small positive actions associated to gains in terms of points, which vary depending on the importance and complexity of each action. Teams can be formed to achieve more challenging collective goals, as well as comparing your own level to that of the other participants.

Gamification is also spreading rapidly in the Health Sector. "Games are the most potent tool we have for motivating people to try new things, to get them to act, to change their behaviour over time[5]", according to Michael Fergusson, CEO of Ayogo, a company that has designed a digital platform called "Empower[6]" that uses the persuasive power of games to motivate people to adopt healthy habits and improve their health.

With daily prompts to help remind them, patients are required to check in every day to record their behaviours. They are assigned small activities, games and surveys and rewarded for positive changes. Over time, these behaviours turn into new lifestyle habits which help patients make better progress and develop more autonomy in terms of their health.

One of the greatest difficulties encountered when the training given is intended to produce a change in the practices and logic of an organization or, even

[4] onesmallact.practicallygreen.com

[5] https://www.youtube.com/watch?v=OzaVZEJvEb4

[6] http://ayogo.com/empower

more so, in an individual's system of convictions, is the **resistance** offered by the individuals themselves.

No one thinks of himself as corrupt, and the acknowledgement of the action, including within one's own rationalizing tactics, like those described above, requires a level of introspection as invaluable as it is non-immediate and not automatic.

For that reason, traditional training for this specific type of training objective could prove ineffective. From this standpoint, the application of a gaming dynamic can make a valuable contribution as a catalyst for change.

Indeed, gaming is able to absorb us completely, to suspend reality and get around our defence mechanisms by generating *flow* experiences (Csìkszentmihàlyi, 1975) characterised by intense, optimistic involvement, loss of a sense of time, and intense concentration. Gaming is also one of those so-called *autotelic* activities, i.e., they contain within them their own motivation and their own reward and hence are self-nourishing.

This occurs because games are designed using a *human-focused* approach (Chou, 2014), i.e., focusing on the human factor that takes into account emotions, motivations and involvement, and this determines their **success regardless of coercion or control**.

Indeed, by definition games are voluntary acts (Huizinga, 1938). This means that gaming, as a cognitive tool, is primarily self-directed and follows a *pull* logic in which the individual goes in search of knowledge and does so according to his own spontaneous will, desire or need. And it is precisely this factor that maximizes the effectiveness of the learning process, especially when (as in this case) we are in the andragogical field, which has always assigned a fundamental role to autonomy (Knowles, 2008).

In addition to being a formidable motivational machine able to overcome resistance, gaming may be the ideal tool for anticorruption training for yet another reason.

The struggle against corruption is inevitably a long process which, to adopt a sports metaphor, is not like a sprint but rather a marathon, in which the goal should be to try to build a regular habit. This specific type of objective recalls the concept of recursivity of the training, represented by a learning experience that the trainee decides to repeat at regular intervals, organised into **small tasks that do not require too much time to complete**. The characteristics just cited are typical of games that are not used linearly but played repeatedly and are organised into missions/objectives of limited scale and growing difficulty[7].

This approach has its scientific underpinnings in the theory of *cognitive load* (Sweller *et al.*, 1988). The **segmentation of the content** and **the level of the**

[7] Some gamified learning tools that exploit this principle are Duolingo and Memrise (in language learning) and Ribbon Hero (for computer literacy).

student's control over the pace at which the information is presented can be used to reduce the cognitive load (Landriscina, 2007) and hence maximise learning.

Last but not least, whilst playing games people express and reveal themselves, and this makes it one of the most powerful tools when (as in this case) the objective is to learn and know oneself. As Plato put it: "You can learn more about a person in an hour of play than in a year of conversation".

Table 2
INTEGRATING GAME-BASED TRAINING IN ANTICORRUPTION TRAINING

	ANTICORRUPTION TRAINING	
	Web-Based Training	Game-Based Training
Content	anticorruption legislation	psychological and social dynamics underlying corruption
Teaching goals	knowing (cognizance)	knowing how to be (attitudes)
application	mandatory	voluntary
consultation	linear	recursive

4 ACT: Anticorruption Training

ACT, a **game-based learning tool** that complements traditional, web-based anticorruption training, was conceived and designed based on the preceding considerations and an analysis of the *Core Drives*, or key principles, of Gamification as identified by Yu-Kai Chou (*op. cit.*).

Since ACT began as an additional tool to traditional anticorruption training made compulsory by Law 190/2012 for civil servants, the application's primary target are the Public Administration employees who work in areas in which there is a greater risk of corruption-related crimes being committed.

However, corruption is a pathological disease that is widely spread even in private organizations, which are increasingly sensitive to the issue. This is why ACT can also be used in companies as a training tool for guiding the behaviour of employees so that it respects both ethics and legality.

The application will be developed and tested in the coming months. At present, the design phase has been completed through the definition of the concept, the architecture and the gaming mechanics described below.

4.1 Choice of Metaphor

Corruption is like a disease that paralyses a country, weakens it and causes it to regress. Curing this requires more than the application of law; every

[8] A ledger is the master book in which a company's revenues and expenditures are recorded.

individual has to act personally and work on himself. That is the only way to get moving again.

ACT is more than an invitation; it is a virtual gym where trainees can go to hone their own Anticorruption Skills.

The **sports metaphor** exploits the dichotomy between the concepts of paralysis/weakening/regression and those of training, running, exercising. On the one hand, we have negative connotations that symbolise corruption, whilst on the other there is a proactive approach that puts the focus on the user and turns him into a promotor of the fight against corruption.

This strategy, frequently utilised in game design, refers to epic narration (*Core Drive Epic Meaning & Calling*).

4.2 Anticorruption Skills

Just as we hone our resistance, strength and speed at a gym, with ACT we can exercise our ability to combat the rise of corrupt behaviours. These abilities refer to **specific skills that enable individuals to recognise and defuse rationalizing and socializing mechanisms**. For example:

- **Community**. Understanding that the consequences of one's own actions in a community have a direct impact on the lives of others, helps reduce the sense of *psychological distance* and prevent the corrupt individual from convincing himself that he has not done anyone any harm, thereby setting off "denial of injury".
- **Introspection** Improving an individual's ability to know himself and to make objective assessments contributes to avoiding a "selective social comparison" that uses comparisons to diminish one's own responsibility, taking a relative and non-absolute, objective view.
- **Responsibilization**. Learning to recognise these unconscious mechanisms that lead to denying the victim ("denial of victim") and delegitimizing him ("condemn the condemner") or to calling oneself to higher values ("appeal to higher loyalties") positively influences the individual's ability to assume responsibility for his own actions rather than projecting blame outside himself.

4.3 Training Games

The tools to train the anticorruption skills are training games. For every skill there is a corresponding set of exercises consisting of **casual games**, a genre that is characterised by a simple game structure, short gaming sessions and *replayability*.

In this type of game, the **time component** is fundamental; in fact, the pla-

yer competes against himself and against time. Mechanics like the countdown (*Core Drive Scarcity & Impatience*) cause people to work harder because they perceive the presence of a defined and limited window of time outside of which the goal cannot be achieved.

To explore and firm up this analysis, we examine the structure and content of one game.

Table 3
TRAINING GAME EXAMPLE

Name	Discard the card
Skill	Responsibilization
Reference behaviour	Euphemistic language
Teaching goal	Stimulate the ability to immediately distinguish authentic language from euphemistic language
Task	The player is given copies of cards. A word is written on each card. The two words have the same meaning and therefore appear to be synonyms. However, one of the two words uses authentic language, whereas the other uses so-called euphemistic language that ennobles one's own perception of one's actions. The player must recognise the authentic language as quickly as possible and discard the card with the euphemistic language. After responding, the player is given new copies of cards until they have been used up in the allotted time.
Scoring	The score is linked to the number of cards guessed correctly within the time limit.

Fig. 1 Game interface

4.4 Anticorruption Index (ACI)

The player's performance in the individual games determines his score in the various skills, and the average of the points accumulated in the area of skills generates an overall figure called the ACI (Anticorruption Index) which is a **unique indicator of how good the player is**.

Passing a certain index threshold gives access to the next level of the game.

This mechanism, called *levelling up*, recalls the need for *Development & Accomplishment* (one of the basic *Core Drives* of Gamification) that pushes us to set challenges and goals of growing complexity and difficulty for ourselves. There is an intrinsic push towards progress in each one of us (albeit in differing forms and ways).

Access to the next level increases the number of games (by expanding the type of exercises offered) and the level of difficulty of the exercises themselves. This system is useful for making the training *adaptive*, i.e., not standardized but calibrated to the trainee's actual progress, so as to be always sufficiently challenging. This feeling of perfect equilibrium "between boredom and anxiety" is perfectly expressed in Csìkszentmihàlyi's work (*op. cit.*).

4.5 Architecture

After an **initial assessment**, this system enables the trainee to measure his progress and assess his own capabilities in each skill set. These initial data are used to draw up a profile of the trainee and plot out a personalised course consisting of a **training programme** (i.e., a set of exercises to reinforce the trainee's skills) and a **daily goal** (i.e., a daily objective in terms of points acquired). The goals are essential if considered in terms of the peculiarities of human nature: man is a goal-oriented species. We are capable of imagining a future state and developing strategies to achieve it; and we often take interest and pleasure in doing so (Prensky, 2007).

When the trainee starts his own training programme, he first accesses the games provided for his course.

Each game is introduced by a **briefing** that introduces the game experience, explaining its objective and providing instructions for playing. The brief's narrative component is fundamental for maximizing motivation: the games are actually introduced as challenges to be overcome.

This is followed by the play experience itself, represented by the **round**.

At the end of the round, the player receives **feedback**, which assigns him a score based on his performance in the game and informs him of his learning progress, i.e., the increase in his skills and playing level.

After the feedback, the player is offered a **debriefing** that helps him contextualise and bring out the key concepts of the play experience, serving as a cognitive anchor. The debrief explores the unconscious defence mechanisms that the gaming has helped highlight and explain.

At the end of the debriefing, the player resumes his training course until he reaches his daily goal.

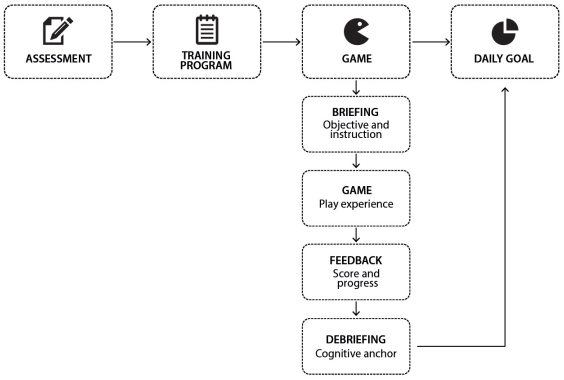

Fig. 2 ACT's architecture

4.6 Game Mechanics and Motivation

Motivation is the backbone of an effective learning experience and of a successful play experience. ACT applies certain specific gaming mechanisms to maximise the player's involvement, promote his participation and stimulate his interest.

Daily training maintains and increases one's skill level, and the system uses a graphic indicator that always shows how the player progresses in the daily session. Immediate feedback is one of the constituent elements of any game (McGonigal, 2011) and constantly measures the direct impact of the player's own commitment and instantly reports on how closely the player is achieving his objectives. A good **feedback system** is essential because it provides the motivation to keep on playing.

In order to maintain player motivation, the learning tool provides **training reminders** that remind the player of his own daily objectives, show him the goals he is approaching and invite him to exceed the score accumulated by other players by giving its best. A sort of *nudge*, as identified by Richard Thaler and Cass Sunstein (Thaler & Sunstein, 2008).

If the trainee skips his training or does not complete it, the skill level tends to decline more or less rapidly depending on how many sessions are skipped (just as happens in actual sports). The application of a **penalty**, or a negative reinforcement, is one of the most common techniques in game design, and it can be attributed to *Core Drive Loss & Avoidance*: the atavistic instinct that leads us to do anything to avoid losing something that belongs to us, or to avert negative events.

Another of the strongest Drives for individuals is *Social Influence & Relatedness*, which pushes us to perform (or not perform) certain actions under

the influence of factors such as acceptance, reciprocity, friendship, status or envy. These factors can be exploited to increase the player's involvement by bringing the cooperative and competitive mechanisms that act within a social system, even in games. Within ACT, players can access a ranking of scores and **compare** their overall performance, the level achieved in individual skills, or progress in the game with other players, both within the player's own organization and with players from other organisations.

Conclusion

Gaming is the most natural tool that our brain uses to learn (Ackerman, 1999), and the large-scale spread of the Gamification phenomenon offers training operators a chance to learn to exploit its enormous power.

By gaming we can create experiences that will have a deep impact on the attitudes and behaviours of individuals, and this is precisely the objective of a training course aimed at preventing, rather than merely repressing, corruption by revealing the psychological and social dynamics behind this complex phenomenon.

The training experience offered by ACT, using a non-blaming, non-paternalistic approach, along with immersion in a learning environment designed to optimise involvement and motivation, helps players identify those mechanisms that unconsciously modify the perception of their own attitudes, behaviours or language. Individuals can thus acquire an understanding of the presence and operation, even inside them, of the mechanisms of de-responsibilization, and this is the basis for defusing those tactics that in fact continue to enable and nourish corruption.

Analysis of applied experiences and the results of this new methodology represent a worthwhile prospect for future research.

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