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TIME WELL-SPENT?

Motivation for Entertainment Media and Its Eudaimonic Aspects Through the Lens of Self-Determination Theory

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There truly has been a “rise of the machines.” The presence of media in people’s everyday lives is growing exponentially. The last century introduced radio and television. The last 25 years have seen the emergence of the Internet and interactive video games. Even more recent was the advent of mobile devices such as smart phones and tablets, which are not yet ten years old. The accessibility of media continues to intensify: As we write, sales of wristwatch devices able to receive text, images, and video are swiftly coming to market. Today one can engage rich multimedia content on demand throughout the day almost anywhere one is.

As these new technologies have become available, people have embraced them in a truly viral way, spending ever-escalating portions of their lives in “screen time.” Although some of this screen time is transactional in nature (e.g., gathering information via watching a news program), a large percentage is solely concerned with entertainment. Critics of this entertainment-enabled media culture are many (Johnson, 2005); their concerns are typically linked with the assumption that most screen time is not “meaningful” activity, and involves mainly ephemeral hedonic satisfactions or escape. Given the sheer amount of time involved, a further question is what activities and satisfactions entertainment screen time displaces or crowds out in people’s lives.

Such concerns are hardly new – indeed they are as old as mass media itself. In a 1778 essay entitled *On Novel Reading*, Vicessimus Knox reacted to the explosion of printed fiction in his time, stating: “If it is true, that the present age is more corrupt than the preceding, the great multiplication of novels probably contributes to its degeneracy” (Brantlinger, 1998). Although fears of degeneracy and indolence seem to be reinvigorated with the emergence of each new form of entertainment, these fears may have peaked with our new age of television and interactive video games (Johnson, 2005; Rigby & Ryan, 2011).

To be *entertained* is to be mentally occupied, or diverted. The concept is fundamentally about something “holding” one’s attention and interest with an end goal of pleasure or satisfaction. Because consuming entertainment is a discretionary act, the satisfactions that lead people to select entertainment experiences, including media such as films and video games, have long been of interest to motivational psychologists (Katz, Blumler, & Gurevitch, 1973; Rigby & Ryan, 2011). Other psychologists more generally have been concerned with the larger question of whether time spent with media entertainment contributes to, or detracts from, both subjective well-being (or happiness) and *eudaimonia*.

Eudaimonia concerns living a life that is not just focused on obtaining immediate pleasures, but rather one of pursuing meaning, virtues, and excellences – a life of fully realizing one’s best human

potential (e.g., Huta, this volume; Ryan, Curren, & Deci, 2013). Aristotle argued that a good life in which one pursues what is reflectively valuable and worthy would also likely be subjectively satisfying and characterized by happiness, even though those outcomes would not be one's aims. Clearly there are many ways in which technology can further our pursuit of meaning and engagement in worthwhile virtuous acts. Our topic here is specifically *entertainment media*, rather than technology more generally, and in this area media more famously distracts us from valued pursuits and worthy actions, occupying us with substitute gratifications (see also Hofmann, Reinecke, and Meier, this volume). Simply put, the gratifications that entertainment media provides may too often be, in terms of psychological nourishment, the mental equivalent of sugared soft drinks.

As we shall document, media entertainment can boost mood, and this is an important function in its own right. Entertainment can in fact be a positive strategy for emotion regulation and mood enhancement, which is why people explicitly seek out entertainment to relax and revitalize. Yet we suggest that pleasure and relaxation do not exhaust the elements that draw us to entertainment media. People also have *eudaimonic interests*, even in their choices of entertainment. These interests are met not only by media's "high art," such as the insights or moral lessons taught by classic films. Rather we suggest that even the hyperbolic heroic feelings people vicariously experience in action films or act out in multiplayer video games have eudaimonic elements that relate to experiencing strengths, virtues, and meaning. In fact, we believe that among the strong gravitational draws of media is its ability to offer us scenarios in which we can experience, vicariously or virtually, not only good feelings, but sometimes good, and even eudaimonic, ways of being (Sicart, 2014).

We explore some of these ideas using the lens of *self-determination theory* (SDT; Deci & Ryan, 2000; Ryan & Deci, 2000). SDT focuses on people's basic psychological needs and their relationship with motivation and wellness. Moreover SDT has argued that a eudaimonic life, a life comprised of pursuing intrinsically worthwhile experiences, goals, and aspirations, is also a life likely to yield basic psychological need satisfactions, which in turn yield positive experiences and wellness (Ryan, Huta, & Deci, 2008).

Modern technologies are highly varied in their uses and impact. In this chapter we will look specifically at *entertainment media* as the primary focus, although we will also touch briefly on other forms of interactive media – such as social media and general Internet usage – which certainly deserve their own in-depth considerations. We will briefly review SDT concepts concerning the basic need satisfactions that motivate and sustain intrinsic motivation, and the satisfaction of which enhances wellness. We then apply these constructs to *interactive media* such as video games, as well as to the less researched area of *narrative media* and why people immerse themselves in print, television, and film stories. We particularly focus on how basic need satisfactions and intrinsic life goals are included as core pillars within classic narrative plots. Having suggested that people can derive significant psychological need satisfactions *within* media experiences, we raise the question as to whether (or when) media engagement might contribute to need satisfactions and eudaimonia outside virtual environments. In fact it is precisely because media can be densely satisfying of needs that self-regulation of media engagement has become important, allowing room for non-virtual acts of meaning, virtue, and excellence.

Self-Determination Theory and Media Use

Self-determination theory (SDT; Deci & Ryan, 1985, 2000) is a broad theory of human motivations, both intrinsic and extrinsic. A core tenet of the theory is the existence of three *basic psychological needs* for competence, autonomy, and relatedness that energize human behavior across domains, including media and leisure activities. *Competence* refers to our need to experience efficacy and personal growth, and is satisfied when we succeed in challenges, learn new things, and feel mastery in any

domain. *Autonomy* refers to our need to feel volitional and agentic, and is satisfied when we feel like we personally endorse and value what we are pursuing. *Relatedness* refers to our need to feel meaningfully connected to others – to feel respected and valued by them.

These basic psychological need satisfactions are fundamental to motivated behaviors in different ways. For example, intrinsically motivated activities, those done for inherent interest and enjoyment, are sustained through satisfaction of competence, relatedness, and autonomy needs (Deci & Ryan, 2000). That is, what makes an activity enjoyable largely lies in its affordance of satisfactions associated with these basic needs. Although media use can vary widely and involve both intrinsic and extrinsic motivations, nonetheless it is largely a volitional activity, and thus presumed to be intrinsically motivated much of the time. In fact a variety of studies have suggested that both active and passive entertainment media, as well as social media such as *Twitter* and *Facebook*, can provide challenges, choices, and relational elements that are conducive to competence, autonomy, and relatedness satisfactions (Calvo & Peters, 2014). For instance, Oliver (2008) conducted several studies showing that enjoyment of sad films – clearly not directly linked to positive hedonic states such as happiness – reflected a propensity toward having feelings of warmth, sympathy, and compassion. Vorderer, Steen, and Chan (2006) postulated a two-factor model for media enjoyment, describing “lower order” satisfactions (i.e., hedonic) that were characterized as immediate and transient and a “higher order” factor consisting of satisfaction of basic needs associated with intrinsic motivation, notably those of competence, relatedness, and autonomy.

Research within SDT has also linked the satisfaction of basic psychological needs not only to sustained motivation, but also to a host of wellness-relevant outcomes including more positive experience, greater well-being, and higher vitality (Ryan & Deci, 2011). Conversely, when these needs are frustrated, negative outcomes such as emotional distress, ego-depletion, and psychopathology result (Vansteenkiste & Ryan, 2013).

Apropos of this volume, each of these needs has also been shown to have close relations with both subjective well-being and activities associated with eudaimonia (Ryan et al., 2008). In fact, SDT has had an important stake in the literature on eudaimonia (e.g., Ryan & Deci, 2001) in part because the theory argues that many virtuous behaviors such as having authentic relationships, helping others, or aiding one’s community deeply satisfy basic psychological needs for autonomy, competence, and relatedness (e.g., Weinstein & Ryan, 2010). As people pursue eudaimonic goals and activities they tend to experience high need satisfaction, which enhances subjective well-being and supplies a sense of meaning. In contrast, SDT suggests that more direct pursuit of happiness via money, fame, or image tends not to be as need-satisfying, and thus tends not to yield as much happiness, suggesting a hedonic irony.

Accordingly, in approaching media entertainment, SDT has several foci. First, the theory suggests that people’s intrinsic motivation for sustained engagement in any media entertainment will be a function of the need satisfactions it affords. Need satisfaction should thus explain variability in media preferences and enjoyment. Second, SDT predicts that need satisfaction yielded through media engagement should result in short-term gains in mood, vitality, and other indicators of well-being (Ryan, Rigby, & Przybylski, 2006). Third, because of the strong capacity of some media to satisfy psychological needs in the virtual context, some individuals overuse media. We thus argue for a *need density hypothesis* (Rigby & Ryan, 2011) in which individuals who have need-satisfying media experiences that contrast with need depriving or need thwarting in other important domains of life are especially at risk of media overuse. Finally, SDT suggests that eudaimonic living enhances wellness (Ryan et al., 2008). Eudaimonic living is in turn described in terms of the autonomous mindful pursuit of intrinsically worthwhile goals, leading to both deep need satisfaction and connectedness with others, and yielding subjective well-being as a by-product. How media consumption enhances or distracts from propensities toward eudaimonic living is thus a relevant question for the theory.

Interactive Media: Motivation and Satisfaction

At its broadest level, the rapid proliferation of social media – through programs that allow for instantaneous sharing of information among friends and acquaintances – certainly demonstrates a strong motivation pull for connectivity and rapid communication. “Daily Active Users” or DAU statistics, an industry standard for measuring the success of software applications, indicate that more than one billion people are using Facebook each day for purposes of social connection, roughly double the usage Facebook had just a few years ago (Statista, 2015). The question at hand is how use of social media (e.g., Facebook, Twitter) may be satisfying of basic psychological needs and representative of the eudaimonic living noted above.

Interestingly, the literature on social media is mixed on this point. While there can certainly be enhancements to relatedness satisfaction through the use of Facebook (e.g., Sheldon, Abad, & Hinsch, 2011) and other social media applications, there is also evidence that such connections may not represent truly eudaimonic living; they may, in fact, serve as replacements when individuals feel they are not receiving enough relatedness satisfaction across other areas of their lives. Although more work on social media is needed, some studies have indicated that the extent of use of such services as Facebook is more likely to reach unhealthy levels when the individual reports a dearth in basic need satisfaction (i.e., competence, autonomy, and relatedness) in their lives generally (Masur, Reinecke, Ziegele, & Quiring, 2014). Thus, while such technologies hold the promise of allowing for more immediate and accessible communication between people, it is possible these social networks often become an unhealthy substitute for the authentic satisfaction of needs that are associated with eudaimonic living.

Our own initial forays into the application of SDT to media began with the study of video games. Video games represent the fastest growing form of entertainment on the planet (Entertainment Software Association, 2015) and, if for no other reason, their satisfactions and effects on well-being deserve attention. Many of today’s leading video games represent extraordinarily detailed experiences for players by combining multiple mechanics, social interaction, and increasing levels of choice and autonomous control. Many leading games present players with a rich tapestry of interactive opportunities and experiences that, unlike passive media such as television or film, allows the audience to lean forward and actively shape the story.

Ryan, Rigby, and Przybylski (2006) conducted an initial series of studies looking at the potential of video games to satisfy SDT’s basic psychological needs. They postulated that players’ interest in and time spent in games would be strongly accounted for by basic need satisfaction. In studies that examined varied types of games, both solo and multiplayer, results showed that both subjective preferences and behavioral measures of intrinsic motivation for playing games were predicted by in-game basic psychological need satisfactions. These studies also confirmed that there are psychological benefits of video game play. Specifically, insofar as playing video games was a vehicle for need satisfaction, players reported short-term *increases* in well-being as indexed by changes in mood and vitality.

Tamborini, Bowman, Eden, Grizzard, and Organ (2010) similarly suggested that enjoyment in interactive games is more than simple hedonic attainment, and that it could be more richly described through the lens of basic psychological need satisfactions. They examined video game enjoyment and need satisfaction in an experimental setting by manipulating features of the game that they expected would directly impact specific need satisfactions. As they predicted, game enjoyment was indeed a function of SDT’s basic need satisfactions, which accounted for more than 50% of the variance in enjoyment. Moreover, they showed by manipulating specific features of games that these features impacted specific need satisfactions. For instance, offering multiplayer options increased relatedness satisfaction, whereas improved control interface led to enhanced competence.

Peng, Lin, Pfeiffer, and Winn (2012) demonstrated experimentally the strong importance of autonomy and competence need satisfactions to sustained engagement in video games. They used an

exercise video game within which multiple features could be manipulated to test the effects of need satisfaction on motivation. For example, in one condition an autonomy enhancement was turned “on” by providing players with choices about customizing their character. This was compared to an “off” condition in which those choices were not offered. Similarly a competence enhancement condition featured a difficulty adjustment system to create optimal challenges, whereas in the “off” condition the system was not deployed and difficulty levels remained constant. These features indeed affected players’ enjoyment and their motivation for future play, among other outcomes: results that were mediated by autonomy and competence need satisfactions. These results again support the SDT perspective on what makes a game intrinsically motivating and mood enhancing.

More recently Oliver et al. (2015) applied SDT to study people’s perceptions of both fun and meaningful games, arguing that basic psychological need satisfactions largely account for experiences of both fun and meaning. They also suggested that a *need for insight* could be satisfied in games and would add to meaning. Their research showed that players rated as their most meaningful games those that were more story-based, and that were particularly associated with the satisfaction of relatedness needs and the need for insight. At the same time, autonomy and competence need satisfactions accounted for game enjoyment across all games, regardless of how meaningful players found them.

It is clear that video games have the ability to provide a variety of emotional and cognitive experiences that enhance positive mood and short-term well-being. Many of the ways in which they enhance positive affect are a result of allowing activity within games that satisfies basic psychological needs. Designing one’s character, selecting missions, forming groups, increasing in ranks and levels, and helping others are all types of activities that afford need satisfaction and are thus sources of enjoyment, explaining the gravitational pull of games for some.

Interestingly, it is these needs that draw people into even the most violent of games. In a series of studies, Przybylski, Ryan, and Rigby (2009) investigated whether the violence present in so many video games motivates players to engage with them. In a series of studies, both experimental and survey based, they showed that it was not violence per se that motivates play. Rather, games of war, conflict, and “zombie killing” readily provide optimal challenges and dense feedback for competence satisfactions, teamwork opportunities for relatedness, and plenty of choices, options, and interesting tasks to support autonomy. When violent games were “modded” to tone down violence, players were just as intrinsically motivated as long as such need-satisfying elements were retained. This suggests that the often anti-eudaimonic appearance of the content of games may not reflect what is motivating the player.

In sum, people engage in and enjoy games in large part because they are designed to gratify certain basic psychological needs for autonomy, competence, and relatedness. They do so through varied mechanics and contents, and with varied success. To the extent that needs are satisfied, games enhance short-term mood and subjective wellness. To the extent that games frustrate needs, they foster more negative mood and even anger and hostility (e.g., Przybylski, Deci, Rigby, & Ryan, 2014). These satisfactions alone tell us much about why people seek this entertainment, including sometimes seeking it too much.

Game Overuse

It is precisely the capacity of virtual worlds to satisfy psychological needs that makes some players vulnerable to game overuse or “addiction” (for a discussion of excessive Internet use, see Müller, Dreier, and Wölfing, this volume). Video games can deliver psychological need satisfactions with an *immediacy*, *consistency*, and *density* unmatched in most other settings (Rigby & Ryan, 2011). These very strengths make video games too irresistible a siren song for some individuals.

Rigby and Ryan (2011) proposed a *need density hypothesis* as an account of susceptibility to overuse. They suggested that, to the degree that players experience impoverished basic psychological need satisfactions in their everyday lives, and are also exposed to positive and densely scheduled need satisfactions within games, they will be vulnerable to overuse. It will be the employee who gets little competence feedback or feels little control or autonomy within a daytime job who may be most drawn to the freedom and power one can feel in some games. It will be the kid who feels left out at school who may most anticipate connecting with others in a massively multiplayer online (MMO) game. Individuals whose daily lives are characterized by low need satisfaction and high need frustration will find video games, with their dense satisfactions, especially attractive.

Consistent with this, Przybylski, Weinstein, Ryan, and Rigby (2009) surveyed video game players, finding that those reporting low levels of daily need satisfaction were more prone to an obsessive passion for game, reporting that play was something they felt they *had* to do. Accompanying this compulsive style are lower levels of enjoyment and need satisfaction in moment-to-moment play. In contrast, people reporting high need satisfaction in life did not have this feeling of compulsion with respect to their video game play, even when video games were a significant and regular leisure activity.

The need density hypothesis applies to online behavior as well. Masur et al. (2014) explicitly looked at time spent in social networking. They found, as SDT predicts, that more time was spent engaging in social networking activities when such activities satisfied basic needs. Yet, in line with the need density hypothesis, the more individuals reported low need satisfaction in life, the more they were driven (i.e., the more obsessive they were) with respect to these social networking activities. Similar findings emerged in Shen, Liu, and Wang's (2013) study of Chinese children's Internet use. They found that obtaining basic need satisfactions during Internet use predicted more time spent online as well as more positive affect during online sessions. Yet again fitting with the need density hypothesis, more basic need satisfaction in daily life predicted *less* Internet use.

Collectively, these findings suggest that the less rich a person's real life, the more susceptible they are to seeking need satisfactions virtually – through entertainment media. For these individuals, video games become an escape, and a substitution for the basic need satisfaction they are not receiving in their everyday lives.

Indeed, video games can even allow individuals to experience a more ideal self than the one they typically experience. In a series of studies, Przybylski, Weinstein, Murayama, Lynch, and Ryan (2012) found that to the extent that players experienced their in-game avatars as representing attributes closer to their ideal (versus actual) selves, they were more likely to persist in a game over time, and to find the game more engaging and immersive. Here again, virtual worlds can *feel* psychologically meaningful, and even an expression of one's better attributes.

Individuals who are vulnerable to overuse because of the need density issue are also likely to be vulnerable to overuse in a second but related way. SDT has long argued that those whose basic psychological needs are not met in their daily lives are generally less able to autonomously regulate their activities and make congruent decisions that match their aims and values (Di Domenico, Fournier, Avaz, & Ruocco, 2013; Ryan, Deci, & Vansteenkiste, 2016). For example, when individuals who have been provided needs support in childhood become passionate about an avocation or activity, they will experience their passion in a more controllable and harmonious way (Vallerand, 2015). In contrast, those whose development entailed more frustration of basic needs are likely to be vulnerable to an obsessive focus on, and passion for, activities that at least partially satisfy these neglected needs, so they will be less able to control that passion. In this way, those low in everyday need satisfaction will also be those less capable of autonomous self-regulation, creating greater vulnerability to overuse.

Video games can certainly provide very “real” psychological satisfactions in an immediate way to the broad audience that plays them, and for a subset of that audience who find fewer need satisfactions

in everyday life their pull can be especially strong. But there is a separate question as to whether these in-game satisfactions, even as they enhance short-term experiences of well-being, contribute to eudaimonia. Before returning to this question, we first review an even less researched area – people’s motivations for consuming more traditional (i.e., non-interactive) narrative media entertainment.

Narratives, Traditional Media Entertainment, and Eudaimonic Satisfactions

It is interesting to note that, despite its shorter history, motivational research on interactive media (e.g., video games and social networking) has been accelerating at a faster rate than research on traditional media alone. Nonetheless, traditional entertainment media such as fictional television and movies continue to occupy a tremendous portion of people’s time and resources; overall, the average U.S. adult consumes more than 25 hours of TV per week (Nielsen: Media and Entertainment, 2015). Interestingly, however, in younger demographics (i.e., those 35 and under), TV viewing is on the decline – presumably because traditional media must increasingly compete with a growing set of choices of interactive media that, as discussed above, can be need satisfying and compelling.

Time spent in traditional media is distinct from that spent in interactive media precisely in its relative passivity. The audience cannot take action, impact stories, or participate in activities that lead to growth, social connection, and other channels for need satisfaction in the ways afforded by interactive media. Basically, the only choice is whether to engage with the story being told, or not. In traditional media entertainment one essentially decides to engage an externally created narrative, and allow oneself to suspend sufficient belief to become immersed in that story. What, then, do we get from such traditional media, and how might it be connected to eudaimonic satisfaction?

Oral narratives represent perhaps the oldest form of human entertainment and fantasy. People love to listen, read, or watch human narratives being played out for many reasons. Listeners identify with characters, imagining these other minds and perspectives, and struggling with the existential issues they face (also see Slater and Cohen, this volume). Indeed Zunshine (2006) suggested that it is the exercise of our capacities for empathy and mindreading that drives our fascinations with fiction. Similarly, Oatley (1999) argued that literature is a simulation – it allows us to vicariously step into various social scenarios and experience the emotional reactions we might have.

Media narratives thus frequently activate a myriad of experiences and emotions, and stimulate a range of personality interests and psychological needs and desires. Such experiential responses to media are perceived as *entertaining*, even when they are not pleasure-toned. In fact some media experiences elicit sentiments antithetical to positive affects such as joy and happiness (Oliver, 2008). Many media narratives that are described as “touching” or “inspirational,” or are otherwise characterized as meaningful are, in fact, tragic or sad in content and evoke negative emotions. Consider a recent best-selling novel and popular film such as *Marley and Me*, which, at its climax, presents the death of a beloved family pet. Certainly this is an emotionally negative ending – yet it was a narrative that many consumers apparently found meaningful and compelling. Again applying the lens of SDT and basic needs, we suggest it evoked *relatedness* feelings that were satisfying to audiences; loss and the sadness that accompanies it cannot happen if there is not a meaningful relationship being affected, and thus the presence of these emotions for many is a sign that this experience of connection – a hallmark of relatedness – was strongly at play. Similarly, relatedness can be seen as a core emotional engagement in the tensions and joys evoked in romantic comedies, as the parties involved ride through challenges to ultimately find for themselves (and the audience) a future of mutual love and respect. In these contrasting examples the valence of the emotions differs, but relatedness is the common thread of meaningfulness that engages the viewer.

Media narratives invariably involve feelings of *tension and conflict*. In direct contrast to early psychological ideas that organisms aim toward tension reduction (e.g., Freud, 1920; Hull, 1943),

people seek to be psychologically stimulated and activated by the conflict and tension narratives create. Yet people also desire *resolution*, usually one that emphasizes (either by conforming to or violating) social justice, morality, or other eudaimonic themes. This is one of the distinguishing characteristics of tragedy versus other plots: In tragedy, there is not a resolution in favor of well-being or good. Despite evoking negative feelings, tragedy remains a common plot device, as the plot highlights key conflicts around values and meaning with which audiences can empathize. In other words, humans indeed seem motivated by having these existential themes activated, even in tragic ways. In entertainment we often become immersed in emotionally salient issues that we face (albeit usually in less dramatic forms) in “real life,” which, as we will see, very often have basic need satisfactions as core ingredients.

What allows people to surrender to immersion, or give themselves over to a narrative, is typically an identification with one or more characters, most often the protagonist or *hero*. Heroes in many narratives exemplify a powerful expression of at least one, and oftentimes all three, of the basic psychological needs for competence, autonomy, and relatedness (Rigby & Przybylski, 2009). This is hyperbolically exemplified in popular superhero narratives: Inevitably, the hero overcomes tremendous adversity to achieve success (competence), usually to the benefit of the countless others who depend upon him or her (relatedness; benevolence), and by taking a path that requires volition and great conviction (autonomy). Movies such as *The Avengers*, *Fantastic Four*, and *X-Men* all involve the dramatic tensions of individuals who choose to come together to build a “better world.”

Basic Plots, Need Satisfaction, and Eudaimonic Themes

Drawing on the work of Carl Jung, Booker (2004) has argued that all narratives, regardless of their specific content, setting, and story, can be distilled into seven basic archetypal plots. Interestingly, the action within each of these plots emphasizes character motivation, development, and story “arcs” that strongly reflect the exploration and satisfaction of basic needs for competence, autonomy, and relatedness. We will briefly review each of these seven plot types through the lens of SDT’s basic needs and the mechanisms they employ to activate eudaimonia-relevant considerations in the audience.

Overcoming the Monster

Dating back to the 5000-year-old story of Gilgamesh and continuing to many present-day narratives (e.g., the original *Star Wars*), this classic story arc follows the path of a heroic figure who must travel to the “lair” of a supremely powerful antagonist (i.e., the “monster”), and – following an epic conflict that seems certain to end in the hero’s demise – defeat the villain.

In this archetypal narrative form, basic need satisfactions are expressed in multiple dimensions. First, the hero represents the epitome of competence and mastery in the undertaking of the quest, and ultimately the final victory. The hero’s conviction and courage express volition and autonomous functioning. Finally, the hero’s actions are done for the benefit of others, as the hero often saves not only loved ones, but a larger world (relatedness).

Heroes must often overcome internal doubts and find within themselves a confidence and empowerment that energizes the actions resulting in victory. The monster itself is often what Booker describes as a “night creature” that “represent(s) . . . everything which seems most inimical, threatening and dangerous in human nature” (Booker, 2004). Overcoming the monster is thus a symbolic victory of one’s autonomous self over forces of control and repression – even when those forces reside within oneself. Indeed, the critical distinction SDT makes between autonomous functioning and controlled functioning is that one is motivated from the values of the *true self*, and not at the whim of either external or intrapsychic pressures (Ryan, Deci, Grolnick & La Guardia, 2006), a distinction explicated within Overcoming the Monster plots.

Rags to Riches

Many stories are based on the idea of the protagonist starting from humble, often destitute conditions, and overcoming a series of challenges to rise both in stature and in levels of happiness, yet often accompanied with a lesson in humility. We see here issues related to multiple aspects of basic need satisfaction and eudaimonia. Foremost is that competence and personal growth are implicated as the protagonist gains mastery of his or her world. For example, in the classic stories within Arthurian lore, Arthur must overcome strong feelings of pride, jealousy, and possessiveness throughout his relationship with Sir Lancelot in order to grow personally and as a hero-leader.

Antagonists in Rags to Riches narratives also highlight issues related to basic needs and eudaimonic development. Antagonists are often extremely selfish and focused on extrinsic goals such as wealth and power. They eschew the intrinsic values that SDT has identified as being positively related to basic need satisfaction, and by extension eudaimonia (Kasser & Ryan, 1996; Ryan et al., 2008). Thus, not only does the villain activate for the audience the importance of pursuits associated with eudaimonia, but it is also the rejection of eudaimonic pursuits that psychologically establishes for the audience who are the villains. In many stories, even with simply one opening line or action that is “cruel” or dismissive (rather than supportive of or consistent with relatedness), we as the audience can identify the villain.

The Quest

In stories involving The Quest, a challenge is again put before the protagonist that involves a commitment to what seems like an impossible goal. That is, the protagonist must go on an odyssey. As in the original *Odyssey* (Homer, 1963), the protagonist will typically face many obstacles and have many “growth experiences” along the way, connecting with themes of competence, relatedness, and autonomy, and their relations with intrinsic and extrinsic goals.

In Quest plots the hero is typically accompanied by companions who emerge as critical to achieving the ultimate goal. Relatedness themes are therefore strongly represented, as characters form strong bonds while pursuing the quest’s goals. For example, in Tolkien’s *Lord of the Rings*, Frodo could never have made it to Mount Doom to destroy the One Ring had it not been for the support of companions, especially Sam, who repeatedly becomes Frodo’s strength when he is weak, and is steadfast even when being rejected by Frodo. Across literatures and media, both classic and popular, we see similar relationships, from *Don Quixote* to the Harry Potter series. Ergo, one of the main satisfactions obtained by protagonists in Quest plots is relatedness.

Voyage and Return

In Voyage and Return narratives, protagonists begin with some sense of incompleteness or disillusionment with their lives and they must then go away to find the solutions or meanings that are missing. For example, in *The Matrix* protagonist Neo is frustrated with his banal existence as a software programmer and desirous of “something more.” He is given the opportunity to leave this “real world” and instead enter into the *actual* real world, requiring him to fight against a complacency that has entrapped him for so long. Ultimately, in Voyage and Return narratives the hero returns a transformed figure who has overcome the meaninglessness of the previous life and now has a higher purpose. More than in other plots, the primary emphasis in Voyage and Return is on autonomy, and finding one’s sense of value and purpose. The story arc takes the hero on a journey that allows her or him to feel a stronger sense of engagement and volition, satisfactions associated with eudaimonia, upon return.

Comedy

Comedy is perhaps the most complicated of all narrative plots. Historically, from Greek times, through Shakespearean comedies, to contemporary situation comedies, this plot type typically involves a variety of situations, characters, and complex plot elements. The complexity of plot threads was cited by Booker (2004) as one of the defining characteristics of Comedy. Yet, throughout all of these structural complexities, common themes also emerge in this plot type. Most notable is what Aristotle called *anagnorisis*, which roughly translates as “discovery,” or the recognition of something about which we were previously ignorant (Grube, 1958). In this way Comedy has as one of its central pillars the construct of creating tension through ignorance, accident, or misunderstanding, which is then resolved in a happy conclusion. The focus of ignorance, and of insight, can be relational (e.g., *When Harry Met Sally*), competence related (e.g., Inspector Clouseau or Maxwell Smart), or about autonomy and acceptance (e.g., *Meet the Fockers*).

Such conflicts of autonomy and identity are especially common in adolescent and young adult media. Comic action often focuses on teens’ attempts to negotiate a course to an authentic identity or relationship that runs between the Scylla of peer pressures and the Charybdis of parental and school authorities. At that age such issues are particularly salient, and therefore the target demographic for these stories can readily identify with both the tension and resolution of basic needs within the Comedic tale.

Tragedy

Similarly to Comedy, Tragic plots entail fundamental conflicts that cause tension, and whose resolution is in doubt. Frequently, Tragic conflicts are between extrinsic goals for power, or wealth and more moral, prosocial pursuits. These conflicts are often also between the desires of the “ego” and more eudaimonic values (e.g., Shakespeare’s *Richard III*; Marlowe’s *Dr. Faustus*). In such narratives, there is a desire to achieve a specific goal that is often pursued as a non-autonomous or obsessive passion (see Vallerand, 2015). Melville’s *Moby-Dick* provides another classic example of obsessive passion – it is a Tragic Quest plot based on fixation and revenge. Here the character of Ahab has no autonomy in his journey, as this tragic hero is compelled, against reason, to find the white whale. Rather than follow his *daimon*, Ahab pursues the demons within himself. Modern-day films and television continue to apply such themes. From the *Devil’s Advocate*, featuring a lawyer susceptible to evil, to *The Sopranos*, a TV show centered on a mafia family, the interplay and conflicts between basic need satisfactions and extrinsic pursuits of power and money help make these shows evocative of “meaningful” issues, even if presented in sensational and provocative ways.

Rebirth

Virtually all *rebirth* stories involve the internal struggle of the main character to overcome selfishness and to realize the deep eudaimonic satisfaction that comes from letting go of ego-driven pursuits, and instead focusing on those actions and pursuits that are more intrinsic (Ryan, Sheldon, Kasser & Deci, 1996) and lead to basic needs being satisfied in a way that represents eudaimonic fulfillment. Rebirth is exemplified in Dickens’ *A Christmas Carol*. Retold countless times in print, recordings, and film, the main character is presented as a greedy, self-absorbed individual who has prioritized the pursuit of wealth over all other values, ignoring intrinsic goals such as close relationships, community contributions, and benevolence. Through the visitation of three ghosts, he is reminded of the deeper satisfactions in life that come through love and caring for others. All of these concepts and ideas resonate with literature showing the benefits of pursuing intrinsic aspirations, and how overvaluing

of wealth or materialism detracts from well-being and happiness (Kasser, 2002). Thus they embody much of what is represented in the idea of eudaimonic satisfaction – namely, satisfaction that is not the result of wealth, power, or image, but is derived through self-improvement, growth, and virtuous caring for others.

Summary

Booker is not alone in highlighting the common themes or “archetypes” we find in narratives. Joseph Campbell (1949) built on the idea of Jungian archetypes to identify fundamental themes that appear ubiquitously in myth and literature, and continue in present-day entertainment media. Thus, regardless of the exact catalog of narrative archetypes, there are salient connections between the elements of these plots and basic need satisfaction, as well as the tension between hedonic and eudaimonic satisfactions. Many narratives explicitly or implicitly explore character strengths, identities, and values strongly associated with eudaimonia, as well as their relation or “balance” with more hedonic pursuits.

It is also worth noting how narratives across all forms of media and plot types so strongly focus on the “internal” psychological processes of the protagonist as the primary device for driving action. Although some plots play out conflicts by directly pitting good protagonists against “evil” antagonists (e.g., *Star Wars*), many narratives are more concerned with the internal processes of the protagonist as they work through issues related to selfishness versus virtue, or greed versus caring and generosity. Colloquially, we often see these issues as illustrative of the “maturing” of the character in ways consistent with eudaimonia, namely movement toward growth, integrity, and gratitude. Certainly many of these portrayals involve sacrifice of oneself for another, or other actions that are consistent with eudaimonia and challenging of purely hedonic satisfactions as a goal of life.

Narrative media thus frequently highlight experiences of basic psychological need satisfactions and conflicts between eudaimonia and extrinsic pursuits. These themes provide a motivating element for immersion in narratives that has persisted throughout the history of storytelling, from oral traditions to the present day. Simply put, people appear drawn to narratives that simulate challenges to integration, and explore salient eudaimonic themes by offering (or frustrating) their resolution.

Media Use: Virtual Versus Everyday Eudaimonia

At the outset of this article we argued that with the emergence of every new media type, some have worried that it will take people away from living a good and meaningful life. Coleridge’s argument that a habit of reading novels “occasions in time the entire destruction of the powers of mind” (Brantlinger, 1998) is one reiterated in turn by many modern critics of television and video games. Are these criticisms correct, or, perhaps more precisely, under what circumstances might they be correct?

So far we have suggested that, although most people think of entertainment use as “just for fun,” people enjoy the opportunities that media entertainments afford to experience – either directly or vicariously – competence, relatedness, and autonomy. In traditional entertainment these experiences are vicarious, as the audience is passive with respect to how the media unfolds. In video games these satisfactions are directly contingent on one’s actions, and thus there is a greater opportunity to directly experience need satisfaction in relationship to personal agency. In fact, social media generally – inclusive of instant messaging and multiple forms of spontaneous communication of words and images – has heightened the opportunity for immediacy and intimacy even when separated by thousands of physical miles. In either case, there is considerable evidence that when media engagement affords satisfaction of autonomy, competence, and relatedness needs it enhances positive affect and vitality. Narratives and games, by virtually simulating or providing opportunities for need satisfaction, can indeed enhance mood and sometimes a sense of

meaning. Further, regardless of the myriad content of countless stories across the centuries, we have proposed that the very DNA of most narrative plots has the activation of basic needs as a central element in motivating engagement.

However, it is still the case that need satisfactions in entertainment media of all types are happening in a virtual rather than a “real life” environment. As Aristotle might have suspected, even a good thing, used too much, is problematic. Reflecting this, we suggested in our need density approach that when psychological need satisfactions derived in the real world ‘pale in comparison’ to the satisfactions experienced in virtual worlds, there is risk of overuse.

Beyond overuse, there is the fundamental question as to whether entertainment media generally enhances or detracts from people’s eudaimonic propensities. In other words, does entertainment media conduce toward eudaimonic improvement of an individual and society, or is it detrimental? We believe this is an important but complicated question that will require significant empirical work, and to that end we offer some initial directional thoughts.

First, there is the question of whether there are differences between traditional and interactive media in their ability to contribute to eudaimonia. Video games represent opportunities – albeit virtual ones – to actively engage in moral decision-making and building cooperative societies and relationships, and to explore other experiences that are directly related to eudaimonic satisfaction. As psychologically real as they might be (Rigby & Ryan, 2011; Ryan, Cornick, Blascovich, & Bailenson, in press) there is still little research on how portable or generalizable these experiences are to the real world. Simply put, do eudaimonic pursuits in games impact people’s overall tendency to be good people *outside* of virtual environments?

In one survey of a Fortune 50 company, the majority of managers felt that having a leadership role in the online game *World of Warcraft* was directly related to leadership skills needed on the job in real life, with many such skills seemingly reflecting eudaimonic ideals consistent with SDT (i.e., relatedness, autonomy support) (Harvard Business Review, 2008). These kinds of correlations, however, do not show that video games are causing improvement in real life skills. It may simply be that those who have such skills gravitate to leadership in both virtual and real contexts. Our focus has been on the potential for *eudaimonic transfer* – whether people internalize positive attributes and moral lessons from media exposure and apply them in life. It seems fair to say that, here too, the extent to which games or media can enhance eudaimonia in non-virtual living remains an outstanding question (see also Sicart, 2014). Causal effects on extra-game prosocial behavior have simply not been well-established.

Studies of need satisfaction in media also highlight that the boundaries between everyday and virtual realities are less clear than one might think. Psychological satisfactions are robustly implicated in motivating people toward media, and virtual experiences can be deeply satisfying. Helping a fellow player in a virtual world is indeed helping another real person (arguably no different than helping them over a telephone call), and it enhances feelings of autonomy, competence, and relatedness just as “real world” helping does (Martela & Ryan, 2016; Weinstein & Ryan, 2010). Simply put, the event may be virtual, but the satisfaction is palpable and “real,” as are the participants behind the virtual avatars.

The motivational draw of such real satisfactions in media in turn suggests a particular challenge for effectively self-regulating media use. The accessible satisfactions of media can seduce consumers into time spent on activities that distract them from what they might reflectively value and find most worthwhile in life. No matter how meaningful the movie, or how exciting the video game, we can always be asking, “Was this the best use of my time?” When our energies are directed toward helping virtual-world friends accomplish virtual goals, is that distracting from attention to real world goals? Recently Lubans et al. (2013) showed, in fact, that those who can successfully regulate screen time do so for more autonomous, integrated reasons. In fact, the best reasons for limiting screen time are those in which the individual reflectively feels that he or she has “better things to do,” rather than those of guilt or self-consciousness following extensive media use (Kubey & Csikszentmihalyi, 1990; Reinecke, Hartmann, & Eden, 2014). This also dovetails with emerging research verifying that

autonomy-supportive rather than controlling styles of parents are more effective in helping children self-regulate and limit screen time (Bjelland et al., 2015).

Inherent in this issue of self-regulation in the face of virtual satisfactions is the idea of *balance*, which is a hallmark quality of many models of well-being and eudaimonia. As Richardson (2015) emphasized, balance in activities is a hallmark of Aristotle's idea of *phronesis*, or practical wisdom, an aspect of which is the avoidance of extremes. In this regard, one potential mediator of whether engagement with entertainment media will facilitate eudaimonia (or simply engender transient emotional experiences) is how mindful the individual is while engaging in media use. Mindfulness refers to the individual's awareness of what is happening in the moment, and his or her ability to be "fully present" in what is happening now, versus becoming lost in reveries or processing "stories" about the past or the future (Brown & Ryan, 2003). As such, we would consider more mindful engagement with entertainment media to include one not becoming "lost" in media experiences that chew away countless hours, but being aware of time spent in the virtual world of media versus alternative choices.

We would also expect that being mindful while engaging in both traditional and interactive media would include a deeper processing of the experience itself (Rigby, Schultz, & Ryan, 2014). By this we mean that, when mindful, one is aware of how one's feelings are being activated by media content and thus more open to reflecting on and integrating the potential relevance of those experiences to one's real life. For example, a father may become steeped in emotions when watching a story that separates a fictional father from his child. If mindful and receptive, this experience may open the father to being more in touch with his "real" connection to his own child. Looking at mindfulness and other mechanisms associated with the transfer of eudaimonic lessons from entertainment to life is thus an important, but largely unfulfilled, agenda for research.

In sum, there is little question that entertainment media – both interactive and traditional – can activate and even satisfy to a certain degree basic psychological needs that are reflective of eudaimonia. Remaining to be explored is how these activations and satisfactions translate to the real world, and whether and how they can seed or support eudaimonic growth. The advent of technologies that make entertainment media so immediately and ubiquitously available may create plenty of "eudaimonic stagecraft" – or experiences that look and feel meaningful and good in the moment, but that in fact do not authentically advance eudaimonic living. In fact, ongoing advances in media will make it ever more challenging to recognize the difference between psychological gratifications that enhance rather than distract from authentic meaningful living. Clearly there are times when media reminds us of, or even calls us to, moral sentiments. Yet how these themes and messages lead us toward or away from virtuous and meaningful living are questions well worth further inquiry.

References

- Bjelland, M., Soenens, B., Bere, E., Kovacs, E., Lien, N., Maes, L., . . . & te Velde, S. J. (2015). Associations between parental rules, style of communication and children's screen time. *BMC Public Health*, *15*, 1002. doi: 10.1186/s12889-015-2337-6
- Booker, C. (2004). *The seven basic plots: Why we tell stories*. London: Continuum.
- Brantlinger, P. (1998). The reading lesson: The threat of mass literacy in nineteenth-century British fiction. *History of Education Quarterly*, *40*, 108. doi: 10.2307/369194
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, *84*, 822–848.
- Calvo, R., & Peters, D. (2014). *Positive computing: Technology for wellbeing and human potential*. Cambridge, MA: MIT Press.
- Campbell, J. (1949). *The hero with a thousand faces* (2nd ed.). Princeton, NJ: Princeton University Press.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*, 227–268. doi: 10.1207/s15327965pli1104_01

- Di Domenico, S. I., Fournier, M. A., Ayaz, H., & Ruocco, A. C. (2013). In search of integrative processes: Basic psychological need satisfaction predicts medial prefrontal activation during decisional conflict. *Journal of Experimental Psychology: General*, *142*, 967–978. doi: 10.1037/a0030257
- Entertainment Software Association (2015). Games: Improving the economy. Retrieved June 30, 2015, from www.theesa.com/wp-content/uploads/2014/11/Games_Economy-11-4-14.pdf
- Freud, S. (1920). *A general introduction to psychoanalysis*. New York: Simon & Schuster.
- Grube, G. M. A. (1958). Editor's introduction. In G. M. A. Grube (trans.) *Aristotle on poetry and style*. Indianapolis, IN: Bobbs-Merrill Educational Publishing.
- Harvard Business Review (2008). Leadership's online labs. Retrieved June 30, 2015, from <https://hbr.org/2008/05/leaderships-online-labs>
- Homer (1963). *The odyssey*. (R. Fitzgerald, trans.). Garden City, NY: Anchor Doubleday.
- Hull, C. L. (1943). *Principles of behavior: An introduction to behavior theory*. New York: D. Appleton-Century Company, Inc.
- Johnson, S. (2005). *Everything bad is good for you: How today's popular culture is actually making us smarter*. New York: Riverhead Books.
- Kasser, T. (2002). *The high price of materialism*. Cambridge, MA: MIT Press.
- Kasser, T., & Ryan, R. M. (1996). Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin*, *22*, 80–87.
- Katz, E., Blumler, J. G., & Gurevitch, M. (1973). Uses and gratifications research. *Public Opinion Quarterly*, *37*(4), 509. doi: 10.1086/268109
- Knox, V. (1778). On novel reading. In I. Williams (Ed.), *Novel and romance 1700–1800: A documentary record*. London: Routledge & Kegan Paul.
- Kubey, R., & Csikszentmihalyi, M. (1990). *Television and the quality of life: How viewing shapes everyday experience*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Lubans, D. R., Lonsdale, C., Plotnikoff, R. C., Smith, J. J., Dally, K., & Morgan, P. J. (2013). Development and evaluation of the motivation to limit screen-time questionnaire (MLSQ) for adolescents. *Preventive Medicine*, *57*, 561–566. doi: 10.1016/j.ypmed.2013.07.023
- Martela, F., & Ryan, R. (2016). Prosocial behavior increases well-being and vitality even without contact with the beneficiary: Causal and behavioral evidence. *Motivation and Emotion*, advance online publication.
- Masur, P. K., Reinecke, L., Ziegele, M., & Quiring, O. (2014). The interplay of intrinsic need satisfaction and Facebook specific motives in explaining addictive behavior on Facebook. *Computers in Human Behavior*, *39*, 376–386. doi: 10.1016/j.chb.2014.05.047
- Nielsen: Media and Entertainment (2015). *Content is king, but viewing habits vary by demographic*. Retrieved June 30, 2015, from www.nielsen.com/us/en/insights/news/2014/content-is-king-but-viewing-habits-vary-by-demographic.html
- Oatley, K. (1999). Meetings of minds: Dialogue, sympathy, and identification, in reading fiction. *Poetics*, *26*, 439–454.
- Oliver, M. B. (2008). Tender affective states as predictors of entertainment preference. *Journal of Communication*, *58*, 40–61.
- Oliver, M. B., Bowman, N. D., Woolley, J. K., Rogers, R., Sherrick, B. I., & Chung, M.-Y. (2015). Video games as meaningful entertainment experiences. *Psychology of Popular Media Culture*, advance online publication. doi: 10.1037/ppm0000066
- Peng, W., Lin, J.-H., Pfeiffer, K. A., & Winn, B. (2012). Need satisfaction supportive game features as motivational determinants: An experimental study of a self-determination theory guided exergame. *Media Psychology*, *15*, 175–196. doi: 10.1080/15213269.2012.673850
- Przybylski, A. K., Deci, E. L., Rigby, C. S., & Ryan, R. M., (2014). Competence-impeding electronic games and players' aggressive feelings, thoughts, and behaviors. *Journal of Personality and Social Psychology*, *106*, 441–457. doi: 10.1037/a0034820
- Przybylski, A. K., Ryan, R. M., & Rigby, C. S. (2009). The motivating role of violence in video games. *Personality & Social Psychology Bulletin*, *35*, 243–259. doi: 10.1177/0146167208327216
- Przybylski, A. K., Weinstein, N., Murayama, K., Lynch, M. F., & Ryan, R. M. (2012). The ideal self at play: The appeal of video games that let you be all you can be. *Psychological Science*, *23*, 69–76. doi: 10.1177/0956797611418676
- Przybylski, A. K., Weinstein, N., Ryan, R. M., & Rigby, C.S. (2009). Having to versus wanting to play: Background and consequences of harmonious versus obsessive engagement in video games. *CyberPsychology & Behavior*, *12*, 485–492.
- Reinecke, L., Hartmann, T., & Eden, A. (2014). The guilty couch potato: The role of ego depletion in reducing recovery through media use. *Journal of Communication*, *64*, 569–589. doi: 10.1111/jcom.12107

- Richardson, K. B. (2015). Eudaimonia or eudaim(a)nia? Finding the golden mean in social media use. In B. A. Beasley & M. P. Haney (Eds.), *Social media and living well* (pp. 13–20). Boston, MA: Lexington Books.
- Rigby, C. S., & Przybylski, A. K. (2009). Virtual worlds and the learner hero: How today's video games can inform tomorrow's digital learning environments. *Theory and Research in Education*, 7, 214–223.
- Rigby, C. S., & Ryan, R. M. (2011). *Glued to games: How video games draw us in and hold us spellbound*. Santa Barbara, CA: Praeger Publishers.
- Rigby, C. S., Schultz, P. P., & Ryan, R. M. (2014). Mindfulness, interest-taking, and self-regulation: A self-determination theory perspective on the role of awareness in optimal functioning. In A. Le, C. T. Ngunoumen, & E. J. Langer (Eds.), *The Wiley Blackwell handbook of mindfulness* (pp. 216–235). West Sussex, UK: John Wiley and Sons, Ltd.
- Ryan, R. M., Curren, R., & Deci, E. L. (2013). What humans need: Flourishing in Aristotelian philosophy and self-determination theory. In A. S. Waterman (Ed.), *The best within us: Positive psychology perspectives on eudaimonia* (pp. 57–75). Washington, DC: American Psychological Association.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and well-being. *American Psychologist*, 55, 68–78.
- Ryan, R. M., & Deci, E. L. (2001). To be happy or to be self-fulfilled: A review of research on hedonic and eudaimonic well-being. In S. Fiske (Ed.), *Annual Review of Psychology* (Vol. 52; pp. 141–166). Palo Alto, CA: Annual Reviews, Inc.
- Ryan, R. M., & Deci, E. L. (2011). A self-determination theory perspective on social, institutional, cultural, and economic supports for autonomy and their importance for well-being. In V. I. Chirkov, R. M. Ryan, & K. M. Sheldon (Eds.), *Human autonomy in cross-cultural context: Perspectives on the psychology of agency, freedom, and well-being* (pp. 45–64). New York: Springer. doi: 10.1007/978-90-481-9667-8_3
- Ryan, R. M., Deci, E. L., Grolnick, W. S., & La Guardia, J. G. (2006). The significance of autonomy and autonomy support in psychological development and psychopathology. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology: Theory and methods* (pp. 795–849). New York: Wiley.
- Ryan, R. M., Deci, E. L., & Vansteenkiste, M. (2016). Autonomy and autonomy disturbance in self-development and psychopathology: Research on motivation, attachment, and clinical process. In D. Cicchetti (Ed.), *Developmental psychopathology* (3rd ed., vol. 1, 385–438). New York: Wiley.
- Ryan, R. M., Huta, V., & Deci, E. L. (2008). Living well: A self-determination theory perspective on eudaimonia. *Journal of Happiness Studies*, 9, 139–170. doi: 10.1007/s10902-006-9023-4
- Ryan, R. M., Rigby, C. S., & Przybylski, A. (2006). The motivational pull of video games: A self-determination theory approach. *Motivation and Emotion*, 30, 344–360. doi: 10.1007/s11031-006-9051-8
- Ryan, R. M., Sheldon, K. M., Kasser, T., & Deci, E. L. (1996). All goals are not created equal: An organismic perspective on the nature of goals and their regulation. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behavior* (pp. 7–26). New York: Guilford.
- Ryan, W. S., Cornick, J., Blascovich, J., & Bailenson, J. N. (in press). Virtual reality: Whence, how and what for? In P. Sharkey (Ed.), *Virtual reality technologies for health and clinical applications*. New York: Springer.
- Sheldon, K. M., Abad, N., & Hinsch, C. (2011). A two-process view of Facebook use and relatedness need-satisfaction: Disconnection drives use, and connection rewards it. *Journal of Personality and Social Psychology*, 100(4), 766–775. doi: 10.1037/a0022407
- Shen, C. X., Liu, R. D., & Wang, D. (2013). Why are children attracted to the Internet? The role of need satisfaction perceived online and perceived in daily real life. *Computers in Human Behavior*, 29, 185–192. doi: 10.1016/j.chb.2012.08.004
- Sicart, M. (2014). Playing the good life: Gamification and ethics. In S. P. Walz & S. Deterding (Eds.), *The gameful world* (pp. 225–244). Cambridge, MA: MIT Press.
- Statista: The Statistics Portal (2015). *Number of monthly active Facebook users worldwide*. Retrieved October 1, 2015, from www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/
- Tamborini, R., Bowman, N. D., Eden, A., Grizzard, M., & Organ, A. (2010). Defining media enjoyment as the satisfaction of intrinsic needs. *Journal of Communication*, 60, 758–777.
- Vallerand, R. (2015). *The psychology of passion: A dualistic model*. New York: Oxford University Press.
- Vansteenkiste, M., & Ryan, R. M. (2013). On psychological growth and vulnerability: Basic psychological need satisfaction and need frustration as a unifying principle. *Journal of Psychotherapy Integration*, 23, 263–280. doi: 10.1037/a0032359
- Vorderer, P., Steen, F. F., & Chan, E. (2006). Motivation. In J. Bryant & P. Vorderer (Eds.), *Psychology of entertainment* (pp. 3–17). Mahwah, NJ: Lawrence Erlbaum Associates.
- Weinstein, N., & Ryan, R. M. (2010). When helping helps: Autonomous motivation for prosocial behavior and its influence on well-being for the helper and recipient. *Journal of Personality and Social Psychology*, 98(2), 222–244. doi: 10.1037/a0016984
- Zunshine, L. (2006). *Why we read fiction: Theory of mind and the novel*. Columbus: Ohio State University Press.