The Ethics of Creative Destruction

The moral dimension of innovation and its implications for management theory, research, and practice

better safe and sound than sorry

HANS BENNINK

Introduction and overview

In order for organizations to be competitive and viable, innovation has been a spearhead in the business domain (WRR, 2013). Innovation has also gained increased acceptance in other institutional domains (governmental, not-for-profit, and non-governmental). There is an abundance of literature explaining the nature and methods of innovation while giving directions to make innovation work and make organizations more innovative (for instance, Huizingh, 2011; Kelley, 2005; Morris, 2006; 2011; Tidd, Bessant & Pavitt, 2001; Trott, 2005; West & Farr, 1990; Van Wulfen, 2012/2014). However, comparatively less attention has been devoted to innovation theory to the moral dimension of innovation. Exceptions include publications of Anokhin and Schulze (2009), Baucus, Norton, Baucus, and Human (2008), Brenkert (2009), Fassin (2000), Giaretta (2005); Harris, Sapienza, and Bowie (2009), Lee (2005), Martin, (2008), Meel and Saat (2002), Pavie (2012), Silver (2012), Soete (2012), and Som, Hilty & Köhler (2009) who all highlight (at times very specific) specific themes connected to branches of industry.

Of course, the traditions of corporate social responsibility (CSR) and sustainability/circular economics, including “Triple P thinking” (Elkington, 1998) show many moral overtones, though not always related to innovation. CSR/sustainability and innovation do not form a Siamese twin. CSR involves more than innovation, whereas innovation is not per se aiming at sustainability, and can even non-sustainable.

Fortunately, the moral dimension of innovation is addressed from other corners than innovation theory, directly or indirectly (by implication). From the philosophy of technique, the impact of technology on society has been scrutinized, by, for instance, Achterhuis (1992a), Anders (1980), Ellul (1954; 1977; 1987), Heidegger (1962), Hottois (1984), Jonas (1973; 1974; 1979; 1992), and Mumford (1934; 1967; 1971). Social philosophers and sociologist also point at the effects of technology on the functioning of individuals in society, for instance, Bauman (1992; 1993; 2000; 2003; 2005; 2006; 2007), Beck (1986/1992), Carr (2012), Van Dijk (2012), Giddens (1991), Habermas (1967; 1981), and Sennett (1998), some of which seem to breath a romantic dismissal of the achievements of technology. From the angle of critical economics, guilt- and fear-ridden texts confront us with the end of economic growth, while not eschewing Malthusian apocalyptic scenarios (Heinberg, 2011; Hopkins, 2008; 2011; 2013). From the management and leadership corner, the focus is ethical leadership and on management (mal?) functioning because of character traits labeled as psychopathic, antisocial, or sociopathic (Babiak & Hare, 2007; Bennink, 2005; Cleckley, 2008; Dutton, 2012; Hare, 1997; Stout, 2005), the snakes in suits that are only out

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1 Throughout this paper, I will use the term “ethics” to indicate the science of morals and morality, whereas “moral” refers to the practice of values, norms, principles, and virtues that are held in a certain social system (family, organization, type of industry, professional organization, society).

2 In the words of Reinert and Reinert (2006, 76), “Schumpeter was not very explicit about his sources, holding the cards that would have revealed the origins of his ideas very close to his chest. Sombart used the term creative destruction for the first time on the very last page of his book Krieg und Kapitalismus (1913).”

3 Egyptian and Greeks mythology both know the myth of Phoenix. This bird lived for five hundred years at a time, and at the end of that time, it built its own funeral pyre and lightened it with the beating of its wings. Phoenix was consumed to ashes, but out of the ashes grew a new Phoenix, which, in time, repeated the 500 year cycle. In medieval Christian writings Phoenix was a symbol of the Resurrection of Christ, in itself a prime example of creative destruction (Reinert & Reinert, 2006, 58).

4 In this tension, Indian philosophy can be recognized, mindful of the three supreme godheads: Brahma the Creator, Vishnu the Preserver, and Shiva the Destroyer. Brahma creates the universe, Vishnu protects what comes into being: his role includes rescuing mankind in times of need, and Shiva, in turn, is the destroyer of the universe, fated to destroy it as it winds down in order to bring about its regeneration. After Shiva finishes his work of destruction, Brahma in turn begins the creation of the universe: thus, the cycle is infinite. In other traditions, Shiva is both the creator and the destroyer: in this capacity, he is often represented as the Shiva Nataraja, the Lord of the Dance (Reinert & Reinert, 2006, 58).
for themselves and for short money. Even from the realm of economics, critical contributions confront us with our lack of competences concerning the art of living, such as the burning question Skidelsky & Skildelsky (2012) ask us: “How much is enough?”, obviously reacting to Gordon Gekko’s adagio “greed is good”. By doing so, these authors join the ever-growing assembly of authors promoting the art of living from several angels and psychological, philosophical and theological positions concerning the good life, for instance Achenbach (2001), Bateson (1989), Dohmen (2002; 2007; 2008), Grün (2002; 2005; 2008), Hadot (2005), Kekes (2002), Meyers (1989), Nehamas (1998), Schmid (1998; 2000), Taylor (1989; 1991). More specific, Onfray (1991; 1993) takes a hedonistic point of view, whereas Derkse (2001), and Grün and Seufinger (1996; 2008) are inspired by Benedictine doctrines, while Foucault discussed the fine art of self-care in several posthumous publications (discussed by Dohmen, 2008). Finally, fine literature has offered us numerous novels warning us for the Faustian effects of the use of technology, such as 2000 of Edward Bellamy (Senn, 2003), Erewhon of Samuel Butler, Brave New World of Aldous Huxley, Orwell’s 1984, and more recently, The Swarm of Frank Schätzing and The Circle of Dave Eggers, not to mention the vast library of science fiction titles, of which, among others, short stories and novels of Jim G. Ballard picture a frightening image of a world we seem to be unable to avoid.

These sources of inspiration offer more than enough opportunities for discussing both the ethics and moral aspects of innovation. In order to organize thought, this paper discusses the moral aspects and ethics of innovation concerning each of the five interrelated areas of tension inherent and essential to innovation:

1. to innovate or not to innovate, in terms of motives, purposes, objectives, resistances
2. the degree of innovation: from incremental to radical (breakthrough)
3. the range of innovation: innovation themes and effective bundles
4. innovation with whom: alone or together (partnership/open innovation/co-creation)
5. the innovation process and organizational institutionalization of innovation (incidental or routine).

Each area of tension implies its own spectrum of moral issues having its specific contents according to the institutional domain and its dominant type of legitimacy and type of responsibility the innovating organization is part of (Bennink, 2012a, 28; 2012b, 305).

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<tr>
<th>institutional fields</th>
<th>type of legitimacy</th>
<th>main type of responsibility</th>
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<tbody>
<tr>
<td>for-profit</td>
<td>making profit</td>
<td>economic</td>
</tr>
<tr>
<td>governmental</td>
<td>exerting authority</td>
<td>legal</td>
</tr>
<tr>
<td>not-for-profit</td>
<td>realizing values</td>
<td>moral</td>
</tr>
<tr>
<td>nongovernmental</td>
<td>offering generous solidarity</td>
<td>discretionary</td>
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In discussing these issues on both its practical (moral) and the theoretical (ethical) part, we will, by way of comparison, also refer to the pyramid of corporate social responsibility as built by Carroll (Carroll, 1991; Schwartz & Carroll, 2003) and to other concepts of responsibility, as well as to the use of an ethic of care in innovation (Pavie, 2012; Tronto, 2009).

Apart from arranging a sample sheet of moral issues concerning innovation within institutional fields, there is the question of how to address these issues on the philosophical-ethical level, in two interrelated ways.

1. Since innovation is not new, many issues can be dealt with by referring to legislation and legal and business ethics literature. Themes include patenting, product obsolescence, product liability and product recall, advertisement, safety and health issues (food additives, bio-industry, expiry), raw material and waste issues (including externalities), intellectual property,
limits of competitive and cooperative behavior (industrial espionage, formation of cartels), labor relations, and privacy issues. If necessary, new rules and regulations can be proposed.

Concerning new issues, the question can be raised whether we can deal with these issues with common or refreshed ethical theories (deontological, teleological, aretaic, axiological, social contract theories and their relations, decision models and thinking tools) (Parfit, 2011a; 2011b). Or do we, alternatively, are in need of ethical innovation, of new modes of ethical thinking, as was proposed by, among others, Jonas (1973; 1979; 1992, see also Achterhuis, 1999b; Apel, 1993; Bernstein, 1995; Donnelly, 1989; Epple, 2009; Hart, 1968; Hirsch Hadorn, 2002; Hösle, 1991; Ketter, 1990; Van der Valk, 2009; Verwer, 2011; Wetz, 2012)?

As it seems, many moral issues are not really new and do perhaps not need an innovation of ethics. Nevertheless, there is call for a new ethics especially because of new issues concerning long term, interactive, cumulative and irreversible effects, far and near both in place and time. To introduce an illustrative, practical element, in this paper, among other small cases or brief examples, the ‘smart phone case’ functions as a vignette, smart phones being the product of a recent series of innovations with uncertain effects, criticized from four angles:

- environmental-political (rapid depletion of raw materials and destabilization of entire regions)
- physical (unknown impact of radiation on the human body, in particular mutagenic effects)
- psychological (‘socialbesitas’, including addiction and other psycho-physical inconveniences, Calis & Kisjes, 2013; Carr, 2010)
- sociological (the effects of massive collection of data on both our privacy and the normative order of society).

The paper winds up with both a research agenda and a discussion of practical implications for both politicians and for managers on all organizational levels when confronted with the ethics of creative destruction (Reinert & Reinert, 2006, 81-86), or put alternatively, the ethics of destructive creation (Calvano, 2007; Guiltinan, 2009).

Moral aspects of innovation

In delving in the rapidly expanding body of literature on innovation while looking for attention paid to the moral aspects of innovation, results are somewhat disappointing, as will be demonstrated by considering the five fields of tension concerning innovation indicated above.

Before we tread on these fields, a brief introduction on innovation is necessary to avoid misunderstanding, for instance being reproached for being an adept of preserving romanticism. Creative destruction, a term ascribed to political economist JOSEPH SCHUMPETER (1883-1950, see picture) points at the necessary replacement of old products by newer, better ones due to entrepreneurial activity. In this sense, innovation is of all times. Schumpeter, who later replaced the term by ‘creative response’ (Perlman, 2003, 163), borrowed the idea of creative destruction from economist WERNER SOMBART (1863-1941)², who on his turn was inspired by philosopher FRIEDRICH NIETZSCHE (notably through his central work Also Sprach Zarathustra) who considered creative destruction much in line with Indian (Hindu) philosophy, pointed at concepts of the circle of creation and destruction (Reinert & Reinert, 2006, 58). Reinert and Reinert also drew some genealogical lines with the philosophy of Herder and Goethe, while pointing at Egyptian, Greek, and Christian notions of dead and resurrection³.

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As such, creative destruction is a neutral developmental description of ongoing evolution based on both the desire and joy of creation in both nature and society (the new standing on the ruins of the old), though with strong transcendental moral overtones caused by the term “destruction”. According to Reinert and Reinert (2006, 56), Nietzsche’s work is both a morality of innovation, and a practical example of the same, insofar as it attacks the existing morality and seeks to replace it with this new morality (in which Nietzsche did not distinguish morality and ethics as is done in this paper). Unfortunately, as Reinert and Reinert (2006, 70) conclude, Nietzsche was rather an eloquent, versatile and persuasive critic than he ever was an architect. Especially, this concerns the characteristics of this new morality (more than ethics), pictured in often-obscure language allowing reductive reading and offering opportunities for dark and mystic interpretations, for instance, concerning Blut und Boden, the Übermensch and crude social Darwinian notions of survival of the fittest and eugenics. Too quickly, Nietzsche passed the awkward demarcation line between fact and norm. As it seems, he committed what Moore in his Principia Ethica (1903), would coin the naturalistic fallacy (leaping from “is” to “ought” without further notification, an issue also discussed by Hume). More precisely, Nietzsche seems to do the fallacious appeal to nature, the claim that what is natural is inherently good or right, and that what is unnatural is inherently bad or wrong. Anyhow, this allows us some space to think about the ethics of innovation, after having identified moral aspects of innovation as necessary activity in economic life and beyond.

(1) to innovate or not to innovate

The first issue is about the essential tension between creation-destruction and preservation. As we learned from Nietzsche, creation is inseparable from destruction. Moreover, the conclusion emerges that innovation is good for its own sake, and not innovating thus is a moral failure because not innovating, at least in Nietzschean fashion, would lead to preservation, stagnation, paralysis, and decline. However, those texts consulted lack attention to the morals of innovation. On the one hand, this is not too surprising, since anything differing from yesterday while appearing to be new can be called innovation, thus lacking a need for specific attention for its moral aspects. Moreover, in laws and regulations, and in guidelines, business and professional codes, it might expected that these aspects are or will probably dealt with appropriately. On the other hand, new issues may emerge that may escape from our attention, yet having unforeseen and undesirable effects.

In the for-profit domain and in other institutional domains as well, each domain along the lines of its own logics, legitimizations and responsibilities, two issues seem to be prevalent: adding value and making profits/cutting costs.

Innovation is said to serve both masters in a very intricate way. Added value can be expressed in various ways (in terms of ideas, products, services, and experiences):

- helping people perform certain tasks (better)
- providing people with a superior idea
- saving time, saving pain, and saving money
- reducing risks/increasing safety and security

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• providing comfort, ease in living, and a good feeling
• advancing people’s status
• augmenting the utility of other products, services, experiences
• making other products, services, and experiences accessible to those people who did not have access to these products, services, or experiences before.

When these innovations are successful, they also may lead to increasing profits, more budget (not-for-profit and non-governmental organizations), less costs (governmental organizations), compliance with (new) rules and regulations, each manifested according to its specific institutional logics, in sum, preserving and enhancing organizational viability.

In texts describing/prescribing innovation procedures, such as funnel models and procedures (Morris, 2011, 137-187), Cooper’s (1990) Stage Gate Systems and the elaboration of its first two stages in the ideation model of Van Wulfen’s (2012/2014) VOORT/FORTH approach, moral decision-making criteria are strikingly absent.

Important are the criteria used in the gates to decide whether to continue with the ideas for innovation or abort them. Generally, two types of criteria are relevant: *must meet* criteria (yes/no) and *should meet* criteria (score on a ten-point scale) (for instance, Cooper, 1990).

<table>
<thead>
<tr>
<th>must meet criteria:</th>
<th>should meet criteria:</th>
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<tbody>
<tr>
<td>o strategic fit (in line with the strategy of the business unit)</td>
<td>o technical hiatus</td>
</tr>
<tr>
<td>o reasonable probability of technical feasibility</td>
<td>o complexity</td>
</tr>
<tr>
<td>o compliant to legal prescriptions</td>
<td>o technical uncertainty</td>
</tr>
<tr>
<td>o expected positive pay-off versus possible risks</td>
<td>o expected cost-effectiveness</td>
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</table>

**must meet criteria:**

- product advantage:
  - uniqueness
  - meeting client needs better
  - price/quality ratio
- market attractiveness:
  - size of market
  - growth of market
  - competition situation
- synergy (leverage functioning with competencies)
  - market synergy
  - technological synergy
  - manufacturing synergy

**should meet criteria:**

- technological feasibility:
  - technical hiatus
- complexity
- technical uncertainty
- risks versus yields:
  - expected cost-effectiveness
  - profits
  - return on investment time
- certainty of proceeds/estimation of profit
- low cost
- quick workability

In the same vein, Van Wulfen (2012, 43) mentions eight characteristics for great ideas for innovative products, services or business models:

<table>
<thead>
<tr>
<th>fits management’s business goals</th>
<th>is (somehow) considered quickly feasible</th>
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<tbody>
<tr>
<td>has adequate profit potential</td>
<td>it gives direction</td>
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<tr>
<td>creates its own internal support</td>
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Apart from aiming at legal compliance and an unspecified notion of risks to be avoided, there are no moral criteria in these considerations. Because of the lack of these notions, funnels and stage gate models run the risk of rejecting excellent ideas for a better life. Moreover, the added value realized by the innovation has an specific idea of “the good life”, though seldom made explicit. It
is a common idea that in neoliberal societies persons are free in choosing their own conception of the good life and that governments should not patronize and refrain from imposing a philosophy of life and living. However, as Skidelsky and Skidelsky (2012) point out, neoliberal societies actually do prescribe a certain conception of the good life, for instance, by protecting consumers’ rights and promoting economic growth and working hard as the core values, stimulated by advertisement, as a backdoor form of paternalism. Even from a global perspective, a hedonistic fashion of the good life seems to become prevalent, expressed in the famous adagio “greed is good” in which happiness in life is understood in terms of more and more material wealth and reduction of life’s inconveniences (seeking pleasure and gain, avoiding sorrow and pain, put briefly). There seems to be less room for a view of the good life in terms of the free life as a form of art, a mindful and spiritual life, striving for wisdom, moral perfection by practicing moral virtues (including modesty, respect, fairness, solidarity, and integrity) and living in harmony with nature.

As an example of perfectionist morality one could consider the seven corporal and the seven spiritual works of mercy (misericordia) as favored in Christianity (Matthew 25: 31-46) to promote happiness of all (Grün, 2008). Grün both connects these works of mercy to the modern world and explains them in a universalistic way (for instance, thirst meaning thirst for love welling up from own well of love, satisfying our own thirst for love, and clothing the naked also meaning covering up the vulnerability of our fellow men, and offering shelter to the homeless meaning taking God into the house of your life, and burying the dead means bidding farewell with dignity, admonishing sinners meaning giving them reasons for hope). Every work of mercy is always an expression of the belief in the secret of man, while carrying the light of Jesus into the world, as Grün puts it.

Based on Keynesian assumptions, Skidelsky and Skidelsky (2012) prefer some generalized leisure society in which people get a guaranteed basic income and have enough time for friendship, personal development, and harmony between humanity, the animal world, and the vegetable kingdom. Their leading question “how much is enough?” can be answered then by making a distinction between needs (in order to survive and live a good and comfortable life) and wants (unlimited desires that go beyond the situation of the destitute). A dram each day to keep the doctor away can be considered a (perhaps problematic) need, and swearing by a 25-year-old Scotch malt a noble wish. In sum, innovation is something to decide upon on moral grounds that go beyond mere satisfaction hedonistic wants.

(2) the degree of innovation: from minor improvement via incremental to radical (breakthrough)

The second field of tension offers also possibilities for discourse about moral aspects. The tension refers to the degree of newness: new for the world, new for our country, new for our industry, new for our organization, new for our customers and clients. The degree of newness hardly concerns radical or breakthrough innovations, but rather Neue Kombinationen as meant by Schumpeter, or new applications in new products or new markets. Nevertheless, two related issues are important enough to pay intention to.

- The first consideration concerns the advertisement part of breakthrough innovations. Too often, small improvements or even continuous upgrading are announced as radical renewals. In the first place, this is a flagrant lie, but in the second place, it points at another, possible more serious moral issue, that of planned obsolescence.
- Planned obsolescence of durables is worth a further exploration. The issue has drawn scrupulous attention of scholars and researchers over time, when taken as mere stimulation

Guiltinan (2008, 20-21) distinguishes two types of obsolescence mechanism, associated with needs and wants, respectively:

- **physical obsolescence**, consisting of limited functional life design (or “death dating”), design for limited repair or non-repair, and design aesthetics leading to reduced satisfaction (for instance, by premature wearing out or rapid deterioration)
- **technological obsolescence**, consisting of design for fashion leading to premature replacement (for instance, clothes, shoes, but also cars, smart phones, or cars) and design for functional enhancement through adding or upgrading product features, apart or in combination leading to outmoding, regardless of functional quality.

The issue shows several aspects, starting with the possible waste of raw materials of all sorts, and reducing products to disposables or litter long before the end of their life span. Furthermore, it forces customers to buy new editions of the product (for instance, a television, a computer program or game, a car, and, of course, clothes), reducing or even destroying the value of that particular product long before it is finished or worn-out. Too early, customers become deprived of after sales activities or delivery of spare parts, however mitigated by the possibility of trade-ins and buybacks. Indeed, at this point we could speak of creative destruction of product value, or perhaps more precise, destructive creation.

An important element is making abuse of customer ignorance, expectations and beliefs concerning environmental aspects of obsolescence. As Niva and Timonen (2001) pointed out,

- consumers lack knowledge about the environmental implications of their purchases - even in product categories where such impacts are widely discussed in the media;
- consumers believe it is the responsibility of manufacturers to produce environmentally benign products and for distributors to screen for such qualities, and that consumers have little impact on those activities.

Guiltinan (2009, 23) also points at the moral issue of sales and marketing responsible for making customers belief that “the utility of a product is diminished simply because a new version becomes available. By extension, offering frequent product “upgrades” while touting minor or illusory benefit improvements might be considered a wasteful and potentially misleading practice” (see also, Giaretta, 2005).

Solutions for the issue of planned obsolescence could be extending the product life (Box, 1983), extending expire dates of pre-packed food and medication up to actual expectations of product utility, developing socially responsible design (Cooper, 2005), or more generally, slowing down product innovation (Giaretta, 2005), and even consider an economy of degrowth (see, for instance, Van den Bergh, 2011; Van den Bergh & Kallis, 2012). Of course, fostering customer consciousness, and finally and better regulations on the governmental and industry level will probably be beneficial. All this touches another moral issue, the dilemma between employment and environment, an issue Skidelsky and Skidelsky (2012) do approach with promising and well-considered perspectives.

(3) the range of innovation: innovation themes and effective bundles

In many publications on innovation as well in innovation practice, innovation is to a large degree understood as making new(er) products based on technological progress, observed client frictions, or both. In our meta-analysis of innovation analyses conducted by students in a broad variety of organizations (both according to seize and type of industry, N= circa 100), the very general pattern emerged of organizations doing some product of service innovation (depending on their type of industry) that can be best understood as small improvements (Bennink & De Groot, 2014).
In a broader fashion, there is more to innovate than just products, as the innovation radar of Sawhney, Wolcott, and Arroniz (2006) indicates (see exhibit). For now, we will discuss some moral issues concerning product innovation, service innovation, customer experience innovation, process innovation, market innovation, marketing innovation, social innovation, brand innovation, and business model innovation. Other innovation issues are discussed in the section below, notably innovation alone or with others, and innovation processes and organizational institutionalization of innovation. It is inevitable that innovation themes overlap or are highly interrelated.

- **product innovation**

Moral aspects of product innovation concern the type of added value of that specific innovation, environmental aspects in terms of raw material and waste, and long-term effects of using that specific product. A complicated moral issue already discussed concerns planned obsolescence in all of its manifestations.

Speaking more generally about added value of product innovation, there is nothing wrong with new or better products that help people perform certain tasks (better), reduce risks or increasing safety and security, and facilitate the utility of other products, services or ideas. Concerning other types of added value, critical remarks can be made from a moral perspective. Advancing people’s status can hardly be called satisfying a need, insofar as striving for status is a questionable narcissistic motivation exploited by business. People deriving status from material goods are rather vulnerable clientele. Perhaps just as serious are the seemingly unsuspected added values of saving time, saving pain, and saving money, and providing comfort, ease in living, and a good feeling. Nothing wrong with, or a condition for creating whole generations of spoiled weaklings incapable of dealing with life’s harder issues? The leisure society promoted by the Skidelskys encompasses more than practicing unlimited laziness, in any case. Here too, sound ideas of the good life can be important guidelines.

More specific concerning long-term effects, the themes of deodorant and the smart phone deserve our attention.

- **Most deodorants** contain aluminum, the only metal that does not naturally occur in the human body and is not decomposed or secreted. Although the association with breast cancer is not verified empirically yet, there is a strong association with dementia due to aluminum stored in certain parts of the human brain, a firm reason to scrutinize the use of aluminum in deodorants.

- **The smart phone** example mentioned in the introduction section identifies four domains in which long-term effects need to be considered. The environmental-political domain concerns the (rapid depletion of raw materials and destabilization of entire regions, notably in Africa and Indonesia). The physical domain concerns the unknown impact of micro golf radiation on the human body, in particular its mutagenic effects, changes in brain electrochemistry, trouble with sleep, suppression of immune system, and so on. The psychological domain, recently labeled ‘socialbesitas’ (Calis & Kisjes, 2013), includes addiction to social media, and other psycho-physical inconveniences, such as diminishing brain plasticity, concentration problems (misleadingly taken as ADHD), inability to understand complex issues such as lines of argument, deterioration of memory because of information overload, scattered attention and lack of focus, digital dementia, social
problems (in the work place and in classrooms), not to mention the corrosion of character, the ‘liquidization’ of society and the threat of shallowness that Sennett (1998), Bauman (2000; 2003; 2005; 2006; 2007), and Carr (2012) alerted us to, respectively. The sociological domain comes to the effects of massive collection of data on both our privacy and the normative order of society in ways George Orwell could not dare to imagine and Dave Eggers tried to describe in his novel *The Circle* (2013). The question is about responsibilities concerning these four domains, an issue addressed in the second part of this text.

Speaking more generally, there is reluctance in business concerning the examination of side effects. Meel and Saat (2002, 24) depart from the assumption that consumers are relatively incompetent in judging the moral impact of products, services, and experiences delivered, because of their tendency to underestimate possible future risks and dangers if the specific product is highly useful for them in present (as seems the case with smart phones). An example taken from ‘meat industry’ by Meel and Saat (2002, 25) concerns the link found between BSE and the Creutzfeldt-Jacob disease, a danger not taken seriously by many people, initially. When it became clear that the prion causing the mad cow’s disease could really cross over barriers between different species, the attitude to the disease had turned into a serious panic. Therefore, Meel and Saat consider (business) organizations as the more responsible party for safe and sound output, even when damage occurs after the product dies out. Meeting legal requirements is not enough, as was made clear in, for instance, the infamous Ford Pinto case (Shaw & Barry, 1995, 84-86). In order to avoid unsafe and unsound output, Meel and Saat (2002, 23) propose a simple three-stage product ethical life cycle, consisting of a stage of ignorance, a stage of ethical dilemma, and a stage of legal regulations, as a corollary of the product life cycle. Ideally, the stage of ethical dilemma should not exist, since a thorough investigation of all possible dangerous aspects of a new product ought to be made before the license for producing and selling it is issued together with enacted safety standards. However, our understanding about safety is continuously changing and the products or technologies we have first thought to be harmless may turn out to be dangerous in the long run (cigarettes, asbestos, led, aluminum, cadmium, DDT, to mention only a few well-known examples) (Meel & Saat, 2002, 25).

Meel and Saat (2002, 25) use the term *malevolent disregard towards the consumer*, that is, being aware of the possible damage but not informing your consumers, or even work against investigations that try to clear up the case. In this respect, producers can chose between three possible courses of action: inform the consumer or society about possible danger and be cooperative in investigations, ignore problems, or deny problems actively and work against investigations. Only in the first case, responsibility is recognized and taken, an issue to be considered below.

- **service innovation**

As our economy gradually moves from a product-oriented way of business to a service-oriented way, much of the remarks made above also apply to service innovation. Especially, there is the danger of a “professiocracy”, in which professionals of all kinds (from hairdresser, financial consultant, to shrink) delivering services determine the needs of clients and make them dependent and helpless while depriving them from their capacities for self-direction and accountability, and of course, mitigating or even hiding the sharp edges of live and living.

- **customer experience innovation**

Customer experience concerns everything a customer sees, hears, feels, and otherwise experiences while interacting with a company at all moments. Innovation at this point means rethinking the interface between the organization and its clients (Sawhney et al, 2006, 31, 32). This involves contents and tone of advertisements, effects of using products and services, support and after sales, including recycling of product (parts). The moral aspects involve honest,

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6 For the most part, multitasking is a phenomenon belonging in the same category as unicorns and UFO’s; try simultaneously reading a book while doing a crossword puzzle, as Carr (2012) puts it.
non-misleading advertisement, ease in product use, comfort of provided services, and generous after sales based on the principles of considerateness and leniency.

- **Process innovation**
An important form of innovation concerns business processes of all sorts, primary (operational), secondary (supporting), and tertiary (administrative) processes. Process innovation can be about marketing and sales, finance, purchasing, logistic, R&D, transformation (from input to output), staffing, and managerial, information and decision-making processes.

Process innovation can take place because of variety of reasons, including:
- reduction of time, especially the de throughput time of transformational processes
- cost reduction concerning people and means
- increasing the quality of products, services, and experiences
- increasing speed and reliability of delivering products, services, and experiences
- advancing sustainable use of products, services, people, and means of production
- pushing back all kinds of externalities
- more effective steering.

When focusing on three main reasons of process innovation - cost reduction, improvement of quality, and reacting faster - a number of actions be distinguished.

- **Cost reduction** can be reached by using cheaper components, better machines (less failures, longer use), rearranging production (shorter or lesser switches), increasing staff competence (for instance, concerning sustainability or cost awareness), increasing in scale (larger production, dispersal of fixed charges), simpler product design, cheaper advertisement, computerize bookkeeping, and facilitating assemblage.

- **Improvement of quality and reliability** of products can be reached by taking care of product life extension, less failure, less maintenance and repair. Improvement of services can be arrived at by making less mistakes, less delay, and better client contact.

- **Reacting faster** to changing circumstances can be achieved by sharper analysis of trends, more efficient stock control, better customer relations, and more effective communication channels.

Each of these actions has its moral aspects, expressed in three related basic themes: responsibility for sustainability, employment, and cost effectiveness. Of course, there are issues of labor conditions (safety, health) and of quality of labor, but these issues are not specific to innovation.

- **Market innovation**
Market innovation appears to be the odd one out. Of course, unmet customer needs can be discovered and underserved customer groups identified. An element of market innovation is presence, creating new points or presence or using existing ones in creative ways, or choosing alternative distribution channels (Sawhney et al, 2006, 76, 79). However, what exactly is the innovative part of entering new markets (going abroad) or identifying and approaching new customer segments? Perhaps, at this point, the concept of innovation becomes somewhat overstretched, though choosing and implementing new distribution channels indeed demands creativity and may be new for some customer segments. Possible moral issues concerning market innovation may include the question whether products, services and experiences to be delivered are in line with the values held by people in those market segments. For instance, providing the Yanomamó Indians ("the fierce people") in the Amazon area (Venezuelan-Brazilian border) with (modern) technology including fire weapons and computers almost led to a complete culture shift and possible disruption of their culture (as was documented dramatically and scrupulously by Chagnon, 1992). Of course, not every market innovation will cause such dramatic effects. Some new markets or market segments will feel blessed with new product, services, or experiences, but the identification of needs, or better, creation of wants (as in the case of introducing participation in investment funds to the lower income categories) always implies moral issues, that sometimes
also turn out to be moral issues of marketing innovation.

- marketing innovation
Concerning marketing innovation, one could raise moral questions regarding the guerrilla marketing method as used by, for instance Bergmann funeral services, (Berlin subway). However, this seems to be a rather innocent affair when compared to the aggressive (tele)marketing taking place based on the massive and hidden use of big data.

Marketing innovation is about the big issue of keeping up privacy and of using data for marketing collected for other purposes than marketing.

Marketing innovation includes all moral issues concerning marketing, such as proper product information, no hidden persuaders, and to prevent breaching of good taste. A final issue to be mentioned here concerns viral and buzz marketing.

Customers using social media may damage providers of products, services, and experiences by transferring false information (for instance, about the quality of movies released recently).

- social innovation
Social innovation is a term with many meanings inviting to misunderstanding. A proposed distinction is one between external social innovation and internal social innovation. On its turn, the latter has also a double meaning: internal social innovation as the principal purpose and internal social intervention as derived from other innovation efforts and thus as part of an innovation bundle. Social innovation need not be new to the world; in most cases it is new for the organization, as was, for instance, the introduction of shorter working hours by law in the Eighties, the instruction of the cafeteria model of conditions of employment (or better, exchange models) during the Eighties and Nineties, or sustainable employability is now, and systems for volunteer aid will be the next five years (at least, in the Netherlands). Long-standing moral issues re-emerge, all related to solidarity among workers and citizens in their exchangeable roles. For instance, is it morally correct to employ older workers (having lost sharpness and being relatively high-paid) at the expense of youth staying unemployed and excluded from career perspectives?

Social innovation understood as part of an innovation bundle must function as the way to reinforce and facilitate other facets of innovation. When innovation in a broad sense asks for as learning organization, moral issues arise when the way the organization confronts staff with contradicting messages (often with a double bind character). That is, an innovation structure and an appropriate learning climate are moral prerequisites for creativity and innovation, with trust and dialogue as important features (Bennink, 2012b, 542, 550, 554, 586; Burns, 1990; Gonzalez-Padron, Hult & Calantone, 2008; Morris, 2006, 203-204; Ruppel & Harrington, 2000; Snell, 7)

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7 The necessary ingredients for a double bind situation are: (1) two or more persons (one of which is the ‘victim’), (2) repeated experience, (3) a primary negative injunction (implying the possibility of punishment), (4) a secondary injunction conflicting with the first at a more abstract level, and like the first enforced by punishments or signals which threaten survival, and (5) a tertiary negative injunction prohibiting the victim from escaping the field (Bateson, Jackson, Haley & Weakland, 1956).
Furthermore, moral leadership is also an important condition for organizations innovating on moral premises (Brown & Treviño, 2006; Gini, 2004). Petrick and Manning (1990, 89-90) provide us with an image of strong moral leadership and suggest improving the quality of the leader - follower exchange by developing a nurturing, collaborative relationship where support for ethical conduct and initiative is regularly provided. In fact, they are rather demanding when claiming that

- formal and informal leaders must personally exemplify and reinforce moral behaviour
- their behaviour should reflect principled (higher) stage moral reasoning,
- demonstrate balanced judgment among the four ultimate values of individual merit, economic quality, organizational growth, and quality of life, and
- model the full moral cycle in the processing and implementation of organization specific values.

A final moral aspect of social innovation concerns the way HR instruments are chosen and implemented as a HR bundle in order to facilitate innovation (selecting and hiring innovative staff, say through participation channels, appraisal of and rewarding innovative behaviour, either in cash, honour, or facilities).

All in all, organizations innovating should do anything to prevent loss of moral capital (and thus, trustworthiness and reputation) (Bennink, 2012a). In the end, business is about trust, value, and money, in that order.

- **brand innovation**

A more radical change is involved in brand innovation, when brand innovation is taken as a leverage or extension of a brand into new domains (Sawhney et al, 2006, 76, 80). Well-known examples are Virgin (from Mike Oldfield’s music via airlines to venture capital) and Nokia (from timber to telephones).

Brand innovation implies always certain risks. In case of introducing a brand to new domains there always is the issue known in terms of cobbler’s sticking to their last. Failure of a well-known brand in new domain may affect the initial image of that particular brand. Especially tricky may be the adoption of a greener brand image, as did BP, and Shell, to a lesser degree. At this point, credibility becomes an important issue, at running the risk of losing market share instead of increasing it. Sometimes, a brand has been taken hostage by a certain client segment, as in the infamous Lonsdale example. A brand exculpation campaign then may be an obvious means to regain customers. Finally, when the famous turn their name into a brand, one may ask whether playing tennis well says something about the quality of underwear or fragrance put to market (Björn Borg and Gabriela Sabatini, respectively).

Speaking more generally, when compared to an iceberg, branding always implies above and below water parts. The part above water is easy to change (for instance logo, lettering, symbols, and advertisement), whereas the underwater part is far more difficult to change because of the intangible elements of identification, meaning, security, associations, experiences, feeling, expectation, reputation, quality guarantee, and familiarity. A strong brand arouses expectations, and connects identity, expectations and customer behavior consistently. Therefore, brand innovation always implies the spreading of an image of the good life, and exactly this raises important moral issues, as was discussed above.

- **business model innovation**

Innovation can be an expensive matter. Apart or as part of an innovation bundle, an organization can decide to innovate its business model, understood as new ways to of earning money or
controlling expenditures. The question is then whether there innovative business models, and next what their moral implications are. Three relatively new modes of business model innovation are to be mentioned here: venture ("vulture") capital, crowd funding, and micro credits. In fact, this innovation issue overlaps to a high degree with the next innovation team: innovation alone or with other parties.

(4) innovation with whom: alone or together

The fourth area of tension concerns innovating alone or in some kind of partnership.

The moral issues involved are twofold and interdependent. The first issue is about the decision whether or not collaborating with other parties, whereas the second issue emerges in case of innovation partnership. Let us take a closer look at both clusters of issues.

There are numerous reasons for innovating alone, reasons having their counterpart in reasons for innovation with other parties. At first sight, these reasons seem of the practical type. However, a closer look reveals issues of trust and sharing, ownership, fairness, confidentiality of information, and responsibility.

<table>
<thead>
<tr>
<th>innovating alone</th>
<th>innovating with partners</th>
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<tbody>
<tr>
<td>advantages:</td>
<td>advantages:</td>
</tr>
<tr>
<td>- no goings-on with partners concerning property and say</td>
<td>- sharing of costs and risks (claims/product recall)</td>
</tr>
<tr>
<td>- unshared revenues</td>
<td>- use of feedback during proceedings</td>
</tr>
<tr>
<td>- no loss of time due to mutual agreements</td>
<td>- combining expertise and means</td>
</tr>
<tr>
<td>- holding trade secrets and customer information</td>
<td>- shorter time of development/time to market</td>
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<td></td>
<td>- better products and services</td>
</tr>
<tr>
<td>disadvantages:</td>
<td>disadvantages:</td>
</tr>
<tr>
<td>- picking up the checks alone</td>
<td>- issues of sharing</td>
</tr>
<tr>
<td>- carrying risks (claims/product recall) on your own</td>
<td>- issues of property</td>
</tr>
<tr>
<td>- lacking expertise/lacking means</td>
<td>- issues of trust and confidentiality concerning trade secrets and customer information</td>
</tr>
<tr>
<td>- little of no feedback during proceedings</td>
<td>- much time for mutual agreements</td>
</tr>
<tr>
<td>- suboptimal quality of output</td>
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<tr>
<td>- longer time to market</td>
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Concerning the second issue, there is broad spectrum of possible partners for innovation and co-creation, including customers/clients, competitors, colleagues, suppliers, buyers, industry organizations, financiers, governmental organizations, location partners, educational and research institutes, each with own moral issues concerning collaboration in innovation, some of which to be addressed below. Many of the moral issues involved can be regulated contractually; who owns what (intellectual property), who runs which risk, who accounts for what, who pays what, who gets what, how to deal with confidential information (about customers, trade secrets, industrial espionage, financial position), and what to do with insider trading opportunities and cartel formation (Fassin, 2000)?
However, in case of cross-institutional cooperation, the moral issues are quite more intricate: business and government, business and not-for-profit (more in particular between business and health care organizations or educational organizations such as universities) (Fassin, 2000; Kenney, 1987). At this point, different institutional logics and diverging moral standards may and will interfere and raise moral issues.

Among the vast amount of examples, one complicated area of concern is highlighted, concerning the triangle business - government - knowledge producing organizations (universities, research institutes). Dutch government has designated nine top sectors, including Agri-food, Horticulture and propagation materials, High Tech, Energy, Logistics, the Creative Industry, Life sciences, Chemicals and Water. These are the sectors in which the Netherlands excels globally and are a government priority. Another area of focus is the establishment of head offices in the Netherlands supposed to help sustaining the country’s strong economic profile, and creating jobs, which makes it important for all top sectors. These top sectors have a strong international position, industry and science sharing a wealth of knowledge and jointly developing innovations. Products and technologies produced by these top sectors contribute to finding solutions to societal issues. The food and horticulture sectors for instance invest in developing healthy foods for consumers. This will help reduce healthcare costs and absenteeism rates (Ministerie van Economische Zaken, Landbouw en Innovatie, 2011).

Top sector organizations are granted several advantages, for instance, reduction in the tax burden. Because most of these top sectors are characterized by a certain degree of geographical concentration, other regions may run the risk of being neglected.

Transferring knowledge from universities to industry may accelerate innovation. However, as Kenney (1987, 127, 128, 132) puts it, the transformation of the university into a research institution for industry could result in the university not adequately training the scientists of tomorrow, and simultaneously, not discharging its duty to do basic research - based on values such as skepticism and disinterestedness - as it focuses on the more applied research industry desires and funds. For profit companies and universities are from very different institutions each having its own logics. Universities are meant to be an unbiased producer of knowledge for the entire society and not for a single entity such a firm or a hospital. Therefore, the challenge is to connect (and not exchange) scientific excellence with economic and social impact and prevent conflicts of interests. Double functions of academic staff and employee (organizational consultant/manager) in organizations universities collaborate with should be avoided to keep up trustworthiness and maintain academic values. Student-teacher relationships should not be charged with conflicts of interests violating these relations in three common ways:

- academic staff will be so activated in their company that students cannot be supervised properly anymore;
- academic staff could very easily direct students into topic areas that are useful to their firm, thereby using students as low-paid employees;
- academic staff are in an ideal position to transfer the unpublished results of a student’s work or ideas to their company (Kenney, 1987, 130, 131, 134).

Finally, there are the more practical valorization questions concerning the quality of student contributions (deliverables such as research outcomes, advice, and tangibles), student supervision, the compensation of student efforts, student supervision, and the assessment of these professional products.

These considerations concerning the triad pictured raise several (categories of) moral questions:
- Is it morally correct that some sectors are given preference to at the expense of other less prominent sectors (such as manufacturing industry) and the people they employ?
- Is it morally correct that some geographic regions are subordinated, with the possible effect of higher unemployment rates?
- Is it morally correct to let business and other organizations determine professional products, instead of professional guidelines and final training descriptors?
- Is it morally correct to develop knowledge for firms only and not for society at large (recognizing that universities are also financed from the general fund)?
Specific concerning the relation business and universities:
- Is it morally correct that academic staff has double functions with double loyalties?
- Is it morally correct that students under instruction arouse expectations to perform professional tasks?
- What is a fair financial compensation for the contribution of student in solving practical problems in business and other organizations?
- How much supervision (from university/school, on the workplace) can/must students get in order to deliver a useful professional product independently?
- What is the responsibility of educational organization in case of substandard professional products?
- Should organizations buy extra quality by hiring staff from the educational organization, and how does compensation take place in those cases?

(5) *the innovation process and organizational institutionalization of innovation*

The fifth field of tension concerns the innovation process (Cooper, 1990; Morris, 2011, 137-138) and the way innovation is instituted in organizations as a routine (Burnside, 1990; Jacobs & Snijders, 2008; Morris, 2006, 199-241; Morris, 2011, 266-292; Nyström, 1990; Tidd, Bessant & Pavitt, 2001; Trott, 2005).

The dilemmas indicated are twofold, concerning the systematic use of innovation process models, such as stage gate models mentioned earlier, and concerning innovation as incidental or as a routine.

Although the models and procedures for innovation seem to be rather technical and non-moral, a closer look reveals hidden issues. One issue already mentioned concerns the lack of moral decision-making criteria in the gates-part of stage-gates models (though legal compliance is a criterion). This means that products and services to be developed are not scrutinized for their moral impact. This impact runs in two directions: eventually launching products, services, and experiences with an immoral impact (no positive added-value, long term negative effects), or not launching products, services, and experiences with positive moral impact (add value to “the good life”) because other criteria (financial, technical, marketing) outweigh this aspect. A special version of the latter concerns medicines not tested thoroughly enough for sending them to market, yet withholding dying patients their last hope for recovery, as recently was the case with a new and promising leukemia medical treatment.

The remedy for these issues is quite simple: bring in moral decision-making criteria in every step of innovation process models, in every gate of it and give them proper weight. The field of tension concerning the organizational institutionalization of innovation (incidental or routine) asks for reasons for (not) institutionalizing.

<table>
<thead>
<tr>
<th>for innovation procedures</th>
<th>against innovation procedures</th>
</tr>
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<tbody>
<tr>
<td>- because innovation should not be incidental but structural</td>
<td>- too complicated/too bureaucratic</td>
</tr>
<tr>
<td>- because innovation is teamwork asking for clear roles and tasks, and relevant expertise</td>
<td>- hampers creativity</td>
</tr>
<tr>
<td>- to limit financial and other risks: stop as soon as possible when it does not work</td>
<td>- causes overhead costs</td>
</tr>
<tr>
<td>- to increase to change at success through transparency, clarity, and utilizing talents</td>
<td>- slows down the process and prevents flexibility</td>
</tr>
<tr>
<td>- to prevent people doing only their thing</td>
<td>- too rigid to incorporate proceeding insights</td>
</tr>
<tr>
<td>- to get the necessary attention from management</td>
<td>- nobody lives up to procedures</td>
</tr>
<tr>
<td>- because innovation is expensive enough to do</td>
<td>- everybody knows for himself what needs to be done</td>
</tr>
<tr>
<td>- carefully and sensible</td>
<td></td>
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<tr>
<td>- to learn from previous innovation processes</td>
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As it seems, the reasons for procedures rather outweigh the reasons against procedures for innovation.

There is a broad range of literature concerning the organization and institutionalizing of innovation as innovation routines, but no special attention to its moral elements. Focusing on these elements comes close to internal social innovation or being tantamount to it, as was mentioned earlier for the most part (moral learning climate, facilitating moral leadership, moral aspects of HRM concerning an innovative organization).
The ethics of innovation

After having arranged a number of moral issues concerning innovation, the question, then, is whether, in line with Nietzsche’s ideal of creative destruction, we really need a specific and new ethics of innovation to help us innovating in a more prudent manner (though Nietzsche might have meant a new morality instead of new ethics, while confusing both terms). Put briefly, do we need an ethics of innovation in the same way as we have a specific ethics of, for instance the medical and other professional domains? As we (at least, many of us) live in democratic societies with much deontology put down in laws, protecting rules and regulations, and supplemented by codes of conduct and ethical guidelines, there may be no necessity for a separate ethics of innovation, perhaps apart from a strong reliance on the precautionary principle (to be discussed later). Looking at Carroll’s pyramid of responsibilities as an example of primary business ethics matter, much has already been thought of, as it seems.

Before we enter the categories of Carroll, a superficial comparison can be made between his pyramid and the model of types of legitimacy and responsibility represented above. Carroll’s model particularly focuses on for-profit companies while extending economic responsibilities with other responsibilities (and other logics) that may be conflicting with the core type of legitimization (making profit by innovating). In fact, Carroll expands the range of responsibilities by including types of legitimizations borrowed from other institutional domains, exerting authority, realizing value, and offering generous solidarity. Organizations operating in other institutional fields may feel obliged to adopt additional responsibilities concerning, for instance, operational management and abiding the law. What then, can be taken from the pyramid of responsibilities when it comes down to innovation? Promising cells in the matrix below are marked in different shades.

<table>
<thead>
<tr>
<th>economic</th>
<th>legal</th>
<th>ethical</th>
<th>philanthropic</th>
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<tbody>
<tr>
<td>1. it is important to perform in a manner consistent with maximizing earnings per share</td>
<td>1. it is important to perform in a manner consistent with expectations of government and law</td>
<td>1. it is important to perform in a manner consistent with expectations of societal mores and ethical norms</td>
<td>1. it is important to perform in a manner consistent with the philanthropic and charitable expectations of society</td>
</tr>
<tr>
<td>2. it is important to be committed to being as profitable as possible</td>
<td>2. it is important to comply with various federal, state, and local regulations</td>
<td>2. it is important to recognize and respect new or evolving ethical moral norms adopted by society</td>
<td>2. it is important to assist the fine and performing arts</td>
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<tr>
<td>3. it is important to maintain a strong competitive position</td>
<td>3. it is important to be a law-abiding corporate citizen</td>
<td>3. it is important to prevent ethical norms from being compromised in order to achieve corporate goals</td>
<td>3. it is important that managers and employees participate in voluntary and charitable activities within their local communities</td>
</tr>
<tr>
<td>4. it is important to maintain a high level of operating efficiency</td>
<td>4. it is important that a successful firm be defined as one that fulfills its legal obligations</td>
<td>4. it is important that good corporate citizenship be defined as doing what is expected morally or ethically</td>
<td>4. it is important to provide assistance to private and public educational institutions</td>
</tr>
<tr>
<td>5. it is important that a successful firm be defined as one that is consistently profitable</td>
<td>5. it is important to provide goods and services that at least meet minimal legal requirements</td>
<td>5. it is important to recognize that corporate integrity and ethical behavior go beyond mere compliance with laws and regulations</td>
<td>5. it is important to assist voluntarily those projects that enhance a community’s “quality of life”</td>
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</tbody>
</table>
For the most part, these formulations of Carroll reveal a deontological mode of ethical thinking, though sometimes disguised in teleological terms, and in aretaic terms, expressed as virtues. Only few of these cells, from the ethical column, offer clues for a specific ethics of innovation. Though the philanthropic column could provide us with images of the good life and its values, at most these stay rather implicit (“quality of life”). Though Carroll’s pyramid does to seem to help us much further, the question is whether this means that have to rethink ethics, as did Parfit (2012a; 2012b) did in his magnum opus, and subsequently need to transform ethics altogether. The claim here to be made here is, that this is not necessary, because the ethics tools available are not per se inadequate for our use.

Ethics theory is considered in terms of argumentation strategies for moral claims (forms of moral position taking) (see Bennink, 2012b, 182-222, for an elaborated exposure of the issue of forms of moral position taking, their underlying argumentation structure, and the way they relate, complete, and presuppose each other). The point to be made here is that we are not in need of new argumentation strategies, but should use gracefully what we already have, and in some instances may look after new moral contents. Put (too) briefly, intuitive ethics (emotivism) considers an act morally correct when it feels good and incorrect when it feels bad put aside, normative theories are fourfold, arranged into two pairs:

- deontological ethics considers something morally correct when moral rules are observed (put down in laws, codes of behavior, and other types of moral guidelines)
- teleological ethics (or consequentialism) considers something morally correct when it has more advantages than disadvantages (for individuals: hedonistic, for larger social systems: utilitarian)
- value ethics (axiological ethics) considers something morally good when moral values are realized
- virtue ethics (aretaic ethics) considers something morally good when moral virtues (such as care) are put to action

It is important to notice, that these normative theories have their own way of demarcating and defining moral issues, as can be derived from the above formulations. Based on Vallentyne (1987, 29-31), discussing the classification of normative theories, a more fundamental arrangement can be made.

The first type of theories consists of theories of obligation, including both deontological and teleological theory, hence labeled obligational theories. These theories are called theories of obligation exactly because they point at the obligation to act in a well-described way. Essential to deontological theories is the obligation to comply with the rules, whereas teleological theories also imply the utmost fundamental decision rule to choose that act (or rule) with the maximum amount of pleasure, well-being, joy, or benefit (or the minimum amount of pain, discomfort, and so on, as described above).

The second type of theories consists of theories of valuation, having at their core moral qualities of acts, persons, and institutions and can therefore be labeled perfectionist ethics.

It is remarkable that Parfit confines himself to the many issues that constitute the complex relation between deontological and teleological ethics, thereby almost neglecting the two forms of perfectionist ethics just mentioned. He (2012a, 375) considers virtue ethics as a form of motive consequentialism, and seems to arrange value ethics within deontological ethics. Nevertheless, the idea is that we cannot think about the ethics of innovation without perfectionist notions of responsibility (both value and virtue), a theme rather ignored by Parfit, but necessary to better understand and complete Carroll’s pyramid of responsibilities.

The moral aspects of innovation can deontologically be captured in all kinds or rules, regulations, prescriptions, and guidelines, as often is the case, and can be captured in complex teleological assessments of pros and cons of actions (sometimes degenerating to indecent bookkeeping, as in the Ford Pinto case).
A more complete account of ethics theory should consider all strategies of moral position taking, and include perfectionist ethics in both its forms. In order to direct our thinking, we need a double distinction concerning responsibility. The first distinction is between material and formal responsibility. Material responsibility concerns contents, that is, the vast amount of issues we can be or are responsible for (for instance, product safety, marketing innovation, business model innovation, process innovation, social innovation), in short: the “what” of responsibility. Formal responsibility is about the way in which we are responsible, the “how” of responsibility.

Concerning formal responsibility, a second distinction will turn out to be useful in an ethics of innovation. At this point, we will follow Bovens (1990, 33-47) when expanding the classification of formal responsibilities taken from Hart (1968). It provides us with two formal notions of responsibility to be discussed briefly, responsibility as accountability (post hoc) and responsibility as virtue.

Responsibility as accountability is a digital form of responsibility, is always in arrear and has a strong legal character: one is either responsible or not responsible (hence, digital), and then only then when three (sometimes four) criteria are met clearly and obviously:
- violation of a norm or infliction of harm (or both, in most cases)
- causal relation between the person held responsible and the damage done
- blameworthiness: the wrongdoer must both be mentally healthy and dispose of alternatives, that is, there should be no reasons for excluding guilt (such as unsound mind, coercion, guiltless ignorance, due misconception, or justified self-defense).

Responsibility as virtue is an analogous form of responsibility (that is, in various degrees), always ex ante, before something has happened or been done. Five criteria are relevant, though not all five have to be met, hence analogous:
- an adequate perception of impending violations of norms or of possible damage
- having an eye for consequences of situations and actions
- being autonomous in making and taking decisions and acting accordingly
- a testable and consistent and understandable code, consisting of moral norms, values and rules, and principles
- taking role obligations seriously (as entrepreneur, manager, citizen, official, professional).

These two formal notions of responsibility can connected with Carroll’s material responsibilities. Economic, legal, and ethical responsibilities can be recognized as accountability, whereas philanthropic responsibility is a virtue. Only the fifth feature of ethical responsibility can be termed a virtuous (“it is important to recognize that corporate integrity and ethical behavior go beyond mere compliance with laws and regulations”).

In sum, for an ethics of innovation, Carroll’s pyramid can hardly be called adequate, which invites to look a bit further. In addition to the works of mercy already referred to, three further associations are worth exploring from the perspective of perfectionist ethics: the principle of innovation-care, the precautionary principle, and the extension and reformulation of the categorical imperative principle proposed by Jonas. These principles have in common that they all aim at some sort of preservation Nietzsche warned us for, and all breathe in some respect the idea of stewardship with regard to the world and its present and future inhabitants.

- **Innovation-care**
  According to Pavie (2012, 3, 6-7), innovation asks for care, for good products, services, and experiences, for sound marketing and effective business processes, healthy and fair labor relations, and so on, observing and going beyond formal rules and regulations. Because and

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8 This criterion is supplemented with a fourth criterion, the relation between the one addressed and the wrongdoer. The extra criterion only applies in those circumstances in which some else than the wrongdoer is addressed. In these cases, the person addressed should have a formal relation with the wrongdoer, for instance between parents and their minor, or employers and their employees, the Prime Minister and the King.
through innovating, we need to take care of humanity, as Pavie (2012, 3, 6-7) puts it, while formulating three elements of responsible-innovation:

- listening to customers and wondering whether their needs and wants should be met from the perspective of moral criteria (for instance launching an educational internet service which automatically makes the students homework once they have logged on)
- innovators cannot calculate or even predict all the consequences of the products, services, and experiences they intend to launch
- recognizing that innovation can cause new risks with an impact on the ecosystem, everyday life and ways of life, both near and fear in distance and future (for instance, the effects of using air-conditioning on carbon emissions, and the effects of the waste of airbags on health and environment because of the chemicals inside, the impacts of complex financial derivates, and of course, the effects of using smart phones already mentioned).

Pavie (2012, 6-7) identifies five issues concerning responsibility:

1. dilution of responsibility because of the many hands involved (from innovator to consumer),
2. responsibility as slowing down or hampering innovation,
3. the object of innovation (for what and for whom would an innovation be responsible?),
4. submission to rules and principles guiding responsibility, and
5. the erosion and loss of meaning of the term responsibility.

Concerning the fourth issue, Pavie proposes to apply the ethics of care to issues of innovation, while referring to Tronto (2009, 37) who defined care as

“a typically human activity which includes everything we do so as to maintain, preserve or fix our ‘world’, aiming at living in it in the best conditions. This world includes our bodies, our individualities and our environment, because we try to mix it in a complex pattern which is the underlying basis of life.”

Though this definition does not perfectly match the theory and practice of innovation, according to Pavie (2012, 10, 16), a concept of innovation-care can partly be defined as enabling to avoid what the care tries to implement: innovation (especially of the break-through type) should not run the risk to destroy the world, the environment or individuals. To Pavie (2012, 16, 18), the Kantian notion of categorical imperative - “act that your principle of action might safely be made a law for the whole world” - is useful within innovation-care, because it highlights interdependence and global consequences and emphasizes wisdom, conscience, and benevolence. However, the idea needs further elaboration, offered by two more principles.

- Precautionary Principle

A concept often referred to is the Precautionary Principle (PP), presented in many formulations and applied to both environmental, health, and social risks (Sandin, 1999; Sandin, 2004; Sandin et al, 2002; Som, Hilty & Köhler, 2009). Though Sandin does not refer to innovation, he gives an account of PP that is usable for an ethics of innovation. According to Sandin (2004, 462), in essence, “the precautionary principle says that on some occasions, measures against a possible hazard should be taken even if the available evidence does not suffice to treat the existence of that hazard as a scientific fact”.

An important part of his contributions concerns a conceptual analysis of the concept of precaution. PP has as famous precursors the Hippocratic Oath (“do no harm”) and proverbs such as “better safe than sorry” and “an ounce of prevention/precaution is worth a pound of cure”. After having explained the difference between precaution and prevention, Sandin (2004, 463, 464-467) identifies and explores three criteria for

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9 Here, Pavie rather uses his own formulations; in Kant’s own (translated) words: “Act only according to that maxim whereby you can at the same time will that it should become a universal law without contradiction”. Apparently, Pavie forgets Kant’s second formulation of the categorical imperative: “Act in such a way that you treat humanity, whether in your own person or in the person of any other, never merely as a means to an end, but always at the same time as an end”. Both formulations are taken from “Grounding for the Metaphysics of Morals”.
precaution: intentionality, uncertainty, and reasonableness, and proposes a comprehensive definition of precautionary actions.

“An action A is precautionary with respect to something undesirable X, if and only if
(1) A is performed with the intention of preventing X,
(2) the agent does not believe it to be very probable that X will occur if A is not performed, and
(3) the agent has externally good reasons (a) for believing that X might occur, (b) for believing that A will in fact at least contribute to the prevention of X, and (c) for not believing it to be certain or highly probable that X will occur if A is not performed.”

A further elaboration concerns the identification of four common elements or dimensions of PP: (1) the threat dimension, (2) the uncertainty dimension, (3) the action dimension, and (4) the command dimension. Sandin (1999; 2004, 468) recasts these formulations into an if-clause of the following kind, containing these four dimensions: if there is (1) a threat, which is (2) uncertain, then (3) some kind of action (4) is mandatory. These dimensions are reflected in existing versions of PP, such as the formulation emerging from the 1998 Wingspread Conference:

“When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause-and-effect relationships are not fully established scientifically”.

Sandin also discusses several arguments against PP (Sandin et al, 2002; Sandin, 2004, 468-470). PP is (1) ill-defined, (2) absolutist, (3) contains a value judgment, (4) increases risk-taking, and (5) marginalizes science, and deals with these charges sufficiently. However, Sandin seems to overlook two other, related pregnant issues concerning PP: the complexity of risk taking and decisive criteria for (not) developing and launching innovations.

The first issue concerns risk taking. PP does not so much increase risk-taking, but has some teleological, consequential elements that may play an important role in innovation. It brings in all the awkward features of consequential thinking: not knowing which consequences will occur, when they will occur, where they will occur, and to which degree, with which magnitude, and with which distribution across parties and persons involved they will occur. For that matter, precautionary measures can cause unforeseen and unwanted side effects as well. Despite the intention to innovate evidence-based, unknown incubators, accelerators, spin-offs, irreversible lock-ins, catalysts, interactions, habituation, extinction, new discoveries and developments (for instance, concerning legislation), and feedback mechanisms (such as learning effects) may make predictions even more complex and difficult, for innovation decision-makers as well as for scientists investigating consequences involved. Moreover, there may be situations, postulated by Jonas (1979, 75), that are sufficiently undesirable existing situations, so, that one should accept any risk to improve them. All this asks for moral imagination and systemic thinking (Bryan, Goodman & Schaveling, 2006; Harris, Sapienza & Bowie, 2009; McVea & Schulze, 2009; Moberg & Seebright, 2000; Senge, 1990; Werhane, 2002). However, lack of full scientific certainty cannot and will not be a definite barrier for developing and launching innovations. Since consequences can and will be expressed in costs, however provisory, it is not surprising, that Doyen and Pereau (2009) consider PP as a robust cost-effectiveness problem. They try to tackle this problem by making a distinction between strong and weak versions of PP (Doyen & Pereau, 2009, 128). Som et al (2009, 497) make a similar, but clearer, distinction between two versions of PP. In the weak version of PP, precautionary measures are taken only where major, irreversible risks could occur and their scientific level of proof is high. In addition, only precautionary measures that have low costs may be taken.

In the strong version of the PP, precautionary measures should be taken whenever there is any speculative evidence of a risk. Neither does the risk have to be high nor irreversible. Precautionary measures are taken irrespective of their costs (for instance, development costs and opportunity costs because of not launching an innovation). In fact, Som et al (2009, 497) describe more a complex continuum than a clear distinction, despite their schematic PP framework.
The essential question is then, what level of knowledge, proof or evidence of a risk occurring is sufficient to implement which precautionary measures, and at what costs. Even more important, what is the appropriate criterion for decision-making concerning developing and launching innovations?

The second issue is about the proper criterion for decision-making and the search for an overarching super principle to guide decisions, capturing elements of intragenerational and intergenerational justice (as was put down in, for instance, the 1987 Brundtland Report). An important candidate is the so-called free space theory of Beyer (1992) and Köchlin (1989). This theory says that PP is intended to preserve free space for the needs, decisions and activities of future generations and avoid path-dependencies, and for the consequences of a modified perception and evaluation of potential impacts, since risk acceptance, the state of scientific knowledge, social values and regulations change over time (‘risk of change’). Side effects of technologies that are regarded as unobjectionable today may be regarded as unacceptable damage tomorrow. Therefore, irreversibility - technically, environmental, and socio-economic - can be used as a criterion essential for operationalizing PP (Som et al, 2009, 500, 501).

The essential question for Jonas is whether the categorical imperative principle still is appropriate as an overarching ethical principle.

- **Categorical imperative principle**

  A third principle is the Kantian categorical imperative (CI), the most fundamental principle in ethics, yet challenged by Hans Jonas (1979) by confronting it with his imperative of responsibility, since CI needs reconsideration. The unease Jonas experiences with CI - in its first formulation: “Act only according to that maxim whereby you can at the same time will that it should become a universal law without contradiction” - has two related reasons.

  The first reason concerns the alleged inadequacy of CI to deal with the provocations of modern technology. As was formulated later by Beck (1986/1992), probably with approval of Jonas, we live in a risk society in which actions that are taken now possibly have far-reaching consequences for other people, both nearby and far away in time and distance, and for the world and all that dwells upon it. Jonas warns for the apocalypse of the ‘too much’ and the decay of creation ex nihilo to annihilation creationis (Van der Valk, 2009, 147).

  The second reason for unease has to do with the alleged lack of both content and foundations of CI, Jonas tried questioning on a more profound, ontological level. His most fundamental question is whether humanity has the right to exist. If the answer is affirmative - that there ought to be mankind, no to non-being and no to non-difference-, human beings should care for the world and bear their responsibilities for the world and in the world. Therefore, Jonas (1979, 36) formulated a new imperative, of responsibility, in several wordings:

  “Act so that the effects of your action are not destructive of the future possibility of genuine [human] life”, or simply: “Do not compromise the conditions for an indefinite continuation of humanity on earth”.

  Elsewhere, Jonas (1974, 95) also formulated a more economic-oriented imperative:

  “Act so that the effects of your action are not destructive of the possibility of economic life in the future”, or simply, “Do not compromise the conditions for an indefinite continuation of some viable economy”.

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10 “…’dass eine Menschheit sei!’” (Jonas, 1979, 90).
In both its contents and formulation, there are similarities between CI and the new imperative of responsibility. Different is the focus of Jonas on the future and on the conditions of life. However, as Van der Valk (2009, 101) (in his excellent dissertation) puts forward, the foundations of both imperatives seem to be diametrically opposed. The ethics of Kant is called deontological, because the good in this theory consists of the concordance of the will with the moral law in which intentions count more than results. The ethics of Jonas can be also called teleological, because in the end it all turns around consequences, the protection of vulnerable objects for keeping capable of being responsible. Care for and even the duty to preserve of the possibility for responsibility is the first responsibility and that responsibility must always be in existence, obligatory in itself, a prospective duty to care and to maintain. In this respect, Jonas formulates a precondition for exercising CI. It also becomes clear that Jonas goes beyond the free-space theory, when formulating preconditions for people to realize that free space. Apart from the similarities, differences between the imperatives of Kant and Jonas can be explained in two related steps. Both emphasize the moral dignity of men, men representing ends-in-themselves, being a value-in-itself and a goodness-in-itself while being concrete purposive individuals, acting subjects that are by necessity finite, mortal, and vulnerable, and permeated with Daseinsangst (existential fear).

Concerning differences, first of all, the CI of Kant focuses on universalizable acts, whereas Jonas focuses on the condition for the preservation of life by adding a notion of the ontological goodness of being and therefore the self-justification of purposive existence, thus focusing on possible actors: not the action, but the conditions for acting (Jonas, 1984, 5, 81, 83; Hirsch Hadorn, 2000, 231). In fact, Kant answers “what” questions, whereas Jonas (also) answers “why” and “to-what-purpose” questions (Kettner, 1990, 437). Second, this means that the ethics proposed by Jonas are from another category than Kant’s CI. In terms Kohlberg’s theory of cognitive moral development (see Bennink, 2012, 218-289, for a representation and discussion), the CI of Kant typically represents a strong form of Stage 6 post-conventional ethics of justice, whereas the CI proposed by Jonas can be labeled Stage 7 post-post-conventional ethics (Kohlberg, Levine & Hewer, 1983, 41-42; Kohlberg & Power, 1981; Kohlberg & Ryncarz, 1990), while promoting the ontological responsibility for the idea of men. The Stage 7 idea is that religious/spiritual intuitions support the moral principle of justice by providing answers to the question “Why be moral at all?” that cannot be answered from a moral perspective alone because this question touches the meaningfulness of human action and of our existence as rational beings in our confrontation with suffering, injustice, loss, and death. Religious orientations are larger in scope than the justice orientation. A metaphoric Stage 7 response to ethical, metaphysical, and religious problems - the search the fundamental meaningfulness of human activity - is based on constructing a sense of identity or unity with being, with life, or with God11.

11 A fine example of Stage 7 thinking can be found in a fragment taken from A Testament of the architect Frank Lloyd Wright (1957) reflecting upon human architecture:

“Constantly I have referred to a more ‘Humane Architecture’, so I will try to explain what humane means to me, an architect. Like organic architecture, the quality of humanity is interior to man. As the solar system is reckoned in terms of light years, so may the inner light be what we are calling humanity. This element, Man as light, is beyond all reckoning. Buddha was known as the light of Asia; Jesus as the light of the world. Sunlight is to nature as this interior light is to man’s spirit: Manlight.

Manlight is above instinct. Human imagination by way of this interior light lived in the man. The spirit is illuminated by it and to the extent that his life is this light and it proceeds from him, it in turn illumines his kind. Affirmations of this light in human life and work are man’s true happiness.

There is nothing higher in human consciousness than beams of this interior light. We call them beauty. Beauty is but the shining of man’s light- radiance the high romance of his manhood as we know Architecture, the Arts, Philosophy, Religion, to be romantic. All come to nourish or be nourished by this inextinguishable light within the soul of man. He can give no intellectual consideration above or beyond this inspiration. From cradle to grave his true being craves this reality to assure the continuation of his life as Light thereafter.

As sunlight falls around a helpless thing, revealing form and countenance, so a corresponding light, of which the sun is a symbol, shines from the inspired work of mankind. This inner light is assurance that man’s Architecture, Art and Religion, are as one - its symbolic emblems. Then we may call humanity itself the light that never fails. Baser elements in man are subject to this miracle of his own light. Sunrise and sunset are appropriate symbols of Man’s
More than Kant did, Jonas advocated an idea of the good life to base his ethics upon, not defined positively, but rather open and defined negatively, in terms of what man should not be (a fearful creature) (Hirsch Hadorn, 2000, 230). By doing so, Jonas does not favor some intergenerational justice (as Kant’s CI could do) but focuses on conditions for being responsible as the essence of being human.12

When we apply these considerations to innovation and use them as a touchstone, we should avoid developing and launching any innovation that affects man’s competence and capacity to be responsible for himself and others, now and in the future. In this respect, both aluminum-based deodorants and smart phones do not pass this test, since they destroy man’s capacity to remain responsible, and, concern innovations, deprive them of their capacity to well informed, rationally, and cognitive-morally judge the added value of new(er) products, services, and experiences.

Suggestions for a research agenda
Many suggestions for research can be done based on the considerations put forward above. Concerning the moral aspects of innovation, the following tentative list emerges:

- in which organizations, arranged by institutional field, do moral questions play a role in innovation decision-making and if so, on what grounds?
- how many and which ideas, products, services, and experiences were not realized though having high positive moral impact?
- do innovating organizations exhibit an appropriate innovation bundle covering and connecting relevant innovation subjects (e.g., product, service, process, social, market, brand, marketing, and business model innovation)?
- how are confidential issues solved in case of co-creation and how many innovation products did fail because of bad cooperation between stakeholders?

On a more philosophical-theoretical level, the theory of Jonas could be examined for its practical implications to make it more appropriate for daily use in innovation practices (see for instance, Achterhuis, 1992b; Apel, 1993; Bernstein, 1995; Donnelly, 1989; Epple, 2009; Hirsch Hadorn, 2002; Hösle, 1991; Ketter, 1990; Van der Valk, 2009; Verwer, 2011; Wetz, 2012).

There is no more precious element of immortality than mankind as thus humane. Heaven may be the symbol of this light of lights only insofar as heaven is thus a haven. Mankind has various names for this interior light, ‘the soul’ for instance. To be truly humane is divinity in the only sense conceivable. There can be no such thing as absolute death or utter evil- all being from the light in some form. In the last analysis there is no evil because shadow itself is of the light.”

12 The ideas of Jonas are not received without criticism, and even labeled in terms of esoteric technophobia (Kettner, 1990, 438). Though this is the place to discuss these critical remarks, some of them are worth mentioning. There is the reproach of being elitist, since only an elite can ethically and intellectually take over the responsibility for the future (Jonas, 1979, 263). Second, Jonas, while stressing the preserving of human life, seems to restrict his ethical considerations to that, apparently excluding plants, animals, landscapes, and other issues of worth (Bernstein, 1995, 18). Third, his ethics is of very general kind, making it less useful in taking everyday discussions (Hirsch Hadorn, 2002, 235) (though the same can be said of Kant’s CI). Fourth, Jonas seems to bridge the gap between is and ought too easily by relying on an ontological, even religiously inspired philosophy of life argument (Bernstein, 1995, 15). Fifth, his ethics cannot be enforced (of course, this can best be done by laws and regulations). Sixth, the teleological elements of the CI of Jonas does not free him from the discussions not unlike those concerning the crowded lifeboat; despite the emphasis on the moral dignity of all, it cannot be excluded that parts of mankind (the powerless) should be sacrificed in order to save (better parts) of mankind (Hirsch Hadorn, 2000, 232). Seventh, the ethical theory proposed by Jonas it not as new as it seems, as Jonas uses many elements of existing ethical theories. For instance, concerning formal responsibility as accountability, the formulations of Jonas (1984, 90) are not very different from the notions from Hart and Bovens mentioned earlier, and is also an incomplete attempt (Bernstein, 1995, 16, 19), yet based in a post-post-conventional approach of morality (the actually new element).
Implications for management theory and practice
A suggestion offered many times is giving ethics a more prominent role in management education, completed with attention for systemic thinking, embracing the strong precautionary principle in the way favored by Jonas, especially for those institutional domains and industries dealing with products, services, and experiences with far reaching consequences, both far in distance and far in time. For every institutional domain, branch-wide the ideas of the good life to be pursued in society, now and in future, based on intra-generational and inter-generational solidarity should be reconsidered, with moral imagination from a systems perspective as guiding mode of thinking. Organizations should be structured to foster creativity, learning, and responsible innovations.

More in particular, concerning durables, there is a three device for preventing waste in case of planned obsolescence (Guiltinan, 2009, 23-26):
- designing and making products with a longer life span, based on insights of the circular economy, while using platform technologies
- adapting branch-wide marketing strategies in order to promote green consumerism instead of modish hedonism
- formulate and implement public policies in order to chance mental models of consuming (based on, for instance, the ideas of “how much is enough” of Skidelsky and Skidelsky, 2012).

An important suggestion concerns including moral criteria in innovation funnels (such as stage gate models) for products, services, and experiences, based on a sound view of the good life. Innovation textbooks should contain thought about the moral issues concerning innovation, of all kind, and business ethics textbooks should pay more attention to innovation. Finally, since managers in all institutional domains play a pivotal role in exercising responsibility, both as accountability and as virtue, they should be screened on psychopathic characteristics to prevent wrong people occupying important positions in organizations.

Outlook
Innovation is a buzzword with often less contents than suggested. It would be good thing not to label minor improvements as innovation, because of its misleading impact on consumers and other stakeholders. In the practice of genuine innovation, there seldom is an innovation bundle combining those innovation efforts that affirm and boost each other to foster success. By implication, there are numerous missed opportunities, which may be labeled an underlying moral issue. If something is to be done, it is to be done good, both practically and morally. At this point, innovation managers and consultants have a pivotal job in creating and realizing chances. Innovation inevitably leads to destruction as a necessary element of evolutionary processes. However, the mere presence of innovation does not make it inherently good. In the dilemma between innovation and preservation, moral arguments should play a more prominent role than they do now. Moral considerations should play a decisive role in innovation processes. They should include a thorough examination of the short-term and long-term (side-) effects of innovation output (not only concerning products, services, and experiences, but also market, marketing, process, social, brand, and business model innovation) on the physical environment, employment, health, wage gap, but most of all on the human condition of people able to informed and responsible decisions about their future. In short, better safe and sound than sorry, while leaving people’s competence for responsibility intact.

References


Dordrecht: Springer.


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