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L'Université n'entend ni approuver, ni désapprouver les opinions particulières du candidat.

Dedicated to the memory of Walter Heimann.

ABSTRACT

This doctoral dissertation addresses the problem of decisions involving economic and moral values. Following a brief introduction in Chapter 2, Chapter 3 offers a review of moral decisions in the economic domain, focused on the situations of empirical interest in this dissertation. Chapter 4 asks how to restore trust in mutual funds after the recent difficulties encountered by the financial sector. Main results suggest that the positive effects of the extra financial criteria used by Socially Responsible Investment (SRI) funds are highly dependent on the similarity in values between the individual investor and a given fund. Chapter 5 seizes the suggestions of recent debates about socially responsible remunerations, and draws a portrait of laypersons' acceptability of a company's executive compensations and general remuneration policies. The main result identifies four clusters of individuals, who decide based on personal views about the justice of remunerations. Chapter 6 investigates the morality of windfall gains, introducing an experimental game (the conceal-reveal dilemma) in which people have the choice between revealing and concealing benefits that others deem as undeserved. The main result is that people rely on decision strategies other than cost-benefit analysis. Consequently, appealing to peoples' moral values is an alternative to financial incentives in situations with undeserved benefits. Finally, the last two chapters (Chapter 7 and 8) discuss the theoretical and practical implications of our empirical findings.

RÉSUMÉ

Cette thèse traite du problème de la prise de décision dans des situations complexes qui impliquent des valeurs économiques et moraux. Chapitre 2 introduit les décisions morales en context économiques en proposant les situations d'un intérêt empirique. Le sujet du chapitre 4 est de restaurer la confiance dans les fonds communs de placement perdus pendant les récentes difficultés rencontrées par le secteur financier. Les principaux résultats suggèrent que les effets positifs de l'intégration de critères extra-financiers - comme cela se fait par exemple dans l'Investissement Socialement Responsable (ISR) (SRI) sont fortement tributaires de la similitude des valeurs de l'investisseur individuel et celles d'un fonds donné. Chapitre 5 saisit les suggestions des débats récents sur les rémunérations socialement responsables et dresse un portrait de l'acceptabilité sociale de la rémunération des dirigeants et celle des politiques de rémunération générales d'une entreprise. Le principal résultat indique l'existence de groupes de personnes qui sont déterminés par des points de vue personnels sur la justice des rémunérations. La troisième étude empirique est présentée dans le Chapitre 6. Elle introduit un jeu expérimental (le dilemme conceal-reveal) qui permet l'étude des gens qui ont le choix entre révéler et cacher des avantages qu'ils ont reçues et qui seraient jugés comme non méritée par d'autres. Le résultat principal est que les choix des gens ne reposent pas sur une analyse coûts-bénéfices et que en conséquence les incitations financières ne sont pas une motivation suffisante pour révéler les avantages qui ne sont pas mérités. Enfin, les deux derniers chapitres (Chapitre 7 et Chapitre 8) traitent des implications théoriques et pratiques de ces résultats empiriques.

PUBLICATIONS

Some ideas and figures of this doctoral dissertation have appeared previously in the following publications:

- Heimann, Pouget, Mullet, and Bonnefon (2011)
- Bonnefon, Girotto, Heimann, and Legrenzi (2013)
- Heimann, Girotto, Bonnefon, and Legrenzi (2013)
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- United Nations Principles for Responsible Investment
- oikos

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ACRONYMS

CSR Corporate Social Responsibility

RSE Responsabilité Sociale des Entreprises

SRI Socially Responsible Investment

ISR Investissement Socialement Responsable

CSP Corporate Social Performance

SV Shareholder Value

ST Stakeholder Theory

CC Corporate Citizenship

IIT Information Integration Theory

ESG Environment, Social, Governance (The most commonly used themes in socially responsible investments)

UNPRI United Nations Principles for Responsible Investment

Part I

INTRODUCTION

I do not know what I may appear to the world, but to myself I seem to have been only like a boy playing on the sea-shore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me.

Isaac Newton

1

RÉSUMÉ EN FRANÇAIS

Cette thèse est un recueil de trois études empiriques qui s'inscrivent dans les recherches sur la Responsabilité Sociale des Entreprises (RSE) (en. Corporate Social Responsibility (CSR)). Alors qu'il existe un désaccord sur la définition exacte de la RSE [1], nous mobilisons son acceptation la plus large: La RSE consiste a se comporter responsable en affaires, et en particulier dans les domaines de l'environnement, les ressources humaines et les échanges avec les actionnaires (Crane, 2008).

A l'échelle individuelle on sait que l'homme se réjouit du bonheur des autres. Autrement dit, tous les agents économiques ont un intérêt dans le bien être de leurs pairs et le favorisent dans leurs actions (A. Smith, 1790). A partir de ce constat on peut émettre l'hypothèse qu'un important levier de la RSE est le comportement individuel : Ce sont les agents économiques agissant au sein des organisations qui influencent si une entreprise est plus ou moins responsable.

L'étude du comportement à l'échelle individuelle est le domaine de la psychologie. Les trois études qui constituent cette thèse s'inscrivent dans une démarche de psychologie expérimentale et visent à révéler les processus cognitifs, les croyances, et les motivations des personnes en tant que acteurs économiques. Dans chaque étude des personnes auront a faire des choix ou émettre des jugements dans une situation qui implique des variables économiques et morales.

Le thème du Chapitre 4 est l'Investissement Socialement Responsable (ISR). Un investissement est considéré comme socialement responsable, si lors de la sélection des investissements le gestionnaire du portefeuille inclut de critères extra-financiers dans son analyse. Un gestionnaire ISR peut, par exemple, éviter d'investir dans une entreprise financièrement attractive parce que cette entreprise se comporte mal dans un domaine comme l'environnement. Il va sans dire qu'il existent de nombreuses autres techniques dans l'ISR. Une description plus en détail est prorogé jusqu'à la Section 3.1, le lecteur intéressé peut également se référer à Crane (2008) et Hoepner and Mcmillan (2009).

1 Le Oxford Handbook of CSR fait mention de 25 définitions dans la littérature académique. Une revue détaillé des différentes approches théoriques est donnée en Appendices 9

On peut alors concevoir l'ISR comme un levier de la RSE. Puisque ce sont les valeurs extra financiers qui déterminent l'investissement, la RSE va s'améliorer dans les domaines qui sous tendent les choix des investisseurs. Ces valeurs utilisée dans l'ISR sont souvent regroupé sous trois thèmes: Environment, Social, Governance (The most commonly used themes in socially responsible investments) (ESG) (Novethic, 2013). Mais cet acronyme dissimule l'étendu du contenu des valeurs morales, parmi lesquelles on trouve, les émissions de CO^2, la biodiversité, le travail d'enfants, les droits des travailleurs, l'égalité salariale ou encore la transparence des rapports annuels. Les expériences du Chapitre 4 font intervenir les valeurs extra-financiers afin d'expliquer le comportement.

Les Expériences 1 à 3 du Chapitre 4 testent l'hypothèse selon laquelle les banqes peuvent utiliser l'ISR pour restaurer la confiance dans les fonds. Après la crise financière en 2008 et plus récemment la crise de la dette européenne, les Français on perdu confiance dans les investissements, et pour la restaurer ils s'attendent à un comportement plus moral des institutions (*Edelman Trust Barometer 2011*, 2011). Puisque le levier de la confiance dans les organisations le plus saillant est la similarité des valeurs (Mayer, Davis, & Schoormann, 1995; Schoorman, Mayer, Davis, & Schoorman, 2007), seul les fonds qui appliquent les mêmes valeurs que l'investisseur bénéficieront des effets de ISR sur la confiance. De plus, les résultats montrent que ce gain de confiance est indépendant de la performance financière et ne peut pas s'obtenir par simple labellisation.

Les Expériences 4 et 5 du Chapitre 4 explorent les variables qui influencent les recommandations des conseillers bancaires. En France, l'ISR est majoritairement institutionnel (Blanc, Cozic, & Hobeika, 2010), alors que les particuliers en expriment aussi la demande (Hummels & Timmer, 2004). Une approche pour augmenter les ISR des particuliers est de mobilier les conseiller clients, car ils influencent les choix de leurs clients (Crawford & Sobel, 1982; Pouget, 2007; Harvey & Fischer, 1997; Sniezek & Buckley, 1995). Les résultats montrent des influences d'une ampleur différente des caractéristiques des fonds (rentablité, niveau de risque, approcha ISR), les attitudes (croyances dans l'argument de la surperformance ISR, valeurs personnelles) et la demande du client (valeurs personnelles du client). Il semble aussi que les conseillers sur évaluent l'importance de la similarité des valeurs du client avec celles du fonds.

Expérience 6 du Chapitre 4 rapporte les résultats d'un jeu d'investissement organisé auprès d'investisseurs particuliers. Graçe a ce jeu il a été possible de mesurer l'influence de variables démographiques, psychologiques, fiancières, et liées aux valeurs ESG sur la proportions qu'investissent les clients d'une banque française dans une situation réaliste avec une incitation financière (€5.000). Les principaux résultats montrent que les traits psychologiques (par exemple, la capacité à résister à la tentation d'un gain immédiat pour obtenir un gain futur plus conséquent, ou bien le soucis de l'image sociale) ainsi que les valeurs morales, notamment en-

vers l'environnement, peuvent être mobilisés pour augmenter les investissements ISR. Les traits psychologiques peuvent aussi conditionner l'efficacité de leviers classiques tels que les labels ISR.

Le thème du Chapitre 5 sont les rémunérations. La rémunération est encadré par système de règles contractuels qui déterminent les droits et les devoirs respectifs de l'employeur et de l'employée. La RSE est une fonction l'acceptabilité sociale des rémunérations, c'est à dire qu'on peut considérer une rémunération comme socialement responsable si son acceptation sociale est élevé, et comme irresponsable si son acceptation sociale est basse.

Appliquant la théorie fonctionnelle de la cognition (cf. Annexes 18) les expériences dans Chapitre 5 mesurent la façon dont réfléchissent les gens sur les plans de rémunération des dirigeants d'entreprises, la politique de bonus générale, et les bonus des dirigeants. La méthode consiste à demander aux gens de juger l'acceptabilité de situations décrites sur des vignettes en faisant varier les constituants du system de rémunération pertinentes. Alors qu'elle mobilise le contenu des rémunérations, l'étude abandonne le paradigme du problème principal-agent au profit d'une compréhension du jugement moral.

Expérience 8 dans Chapitre 5 étudie l'acceptabilité des plans de rémunération d'un dirigeant d'entreprise en fonction de son salaire de base, son bonus, et de ses extras (avantages nature, plan de retraite et parachute doré). Deux groupes de participants qui jugent l'acceptabilité de manière différente existent. Tandis que pour le premier groupe seul une rémunération minimale a tous les niveaux est acceptable le second groupe accepte différentes configurations et accorde beaucoup d'importance au salaire de base.

Les Expériences 9 et 10 du Chapitre 5 étudient l'acceptabilité des bonus en fonction de quatre facteurs de justice (Kpanake & Mullet, 2011) dans deux situations: Chez les dirigeants, et chez tous les employées. Dans les deux expériences quatre groupes de participants avec des jugements structurellement différents existent. La politique des bonus est jugé soit (a) toujours acceptable, (b) principalement en fonction de l'envergure de la distribution parmi les employées, (c) principalement en fonction de la transparance de la procédure qui établit le bonus, (d) en fonction de l'ampleur de la distribution et de l'indemnisation en cas d'accident de travail ou maladie. Les bonus des dirigeants sont jugés soit (a) toujours acceptables, (b) principalement en fonction de l'existence de bonus pour tous les employées, (c) principalement en fonction du montant du bonus et de l'existence de bonus pour les autres employées, (d) principalement en fonction du montant du bonus.

Les études contribuent également en proposant un nouvel outil (la méthodologie issue de l'Information Integration Theory (IIT); cf. Annexes 18) à la communauté des chercheurs en RSE. Il est possible d'envisager des études similaires sur les rémunération des dirigeants qui font varier des constituants tels que, la mesure dans laquelle les objectifs fixés par

l'entreprise ont été atteints, le contexte économique global, ou la disponibilité de cadres supérieurs expérimentés dans le secteur de l'entreprise.

Enfin, Chapitre 6 étudié la décision de révéler (ou cacher) de l'argent non mérité aux autres. L'exemple d'une telle situation de la vie économique est Christian Wullf (ex président d'Allemagne) qui avait reçu un crédit avantageux mais tout à fiat légal d'un entrepreneur qu'il décida de dissimuler. On peut également penser aux nombreux comptes offshores tenus en toute légalité.

Dans les expériences les participants sont dans une situation semblable : Ils perdent un quiz de culture générale mais reçoivent un prix plus important que leur adversaire. Le gain est crée par l'expérimentateur et avoir reçu le bonus n'est pas la conséquence d'une action immorale. Tout comme Mr Wulff s'est vu offrir le crédit sans avoir enfreint la loi. Mais comment décide-t-on si on va révéler cet avantage ?

Il est possible que mis dans une telle situation, les gens font une analyse cout-bénéfice. D'un coté révéler pourrait engendrer réactions adverses causé par un sentiment d'injustice des autres, de l'autre, dissimuler comporte le risque d'être découvert ce qui pourrait être perçu comme un mensonge et engendre des réactions négatives encore plus violentes.

Mais dans les Expériences 11 à 15 du Chapitre 6 les personnes qui reçoivent un prix non-mérité utilisent une autre stratégie pour prendre leur décision. Indépendamment des incitations ou contre-incitations financières, une majorité des personnes ($\approx$ 60%, +800 participants) décide de révéler le gain. Des recherches récentes ont montré que pour de prendre des décisions morales les gens substituent des normes déontiques aux analyses cout-bénéfice (Baumard, André, & Sperber, 2013; Bennis, Medin, & Bartels, 2010; Berns et al., 2012; Sunstein, 2005). L'insensibilité aux incitations dans les expériences indique la présence d'une norme qui sous tend le choix.

En résumé, cette thèse identifie des mécanismes psychologiques qui influencent des décisions économiques dans trois études. Chapitre 4 montre que le contenu des valeurs, et les croyances sur l'ISR sont un facteur important de l'effet de l'ISR sur la confiance, et des choix d'investissements fait par des particuliers. Chapitre 5 montre qu'il existent des systèmes de rémunération socialement responsables, et que différents idéologies quand a l'acceptabilité des rémunérations existent en France. Il a également validé une nouvelle technique d'investigation pour les recherches en CSR. Enfin, Chapitre 6 montre que la décision de révéler des gains que l'on ne mérite pas est une question de normes sociales plutôt que d'analyse cout-bénéfice.

2

ECONOMIC DECISIONS AND MORALITY

I remember when, while having dinner with friends, someone asked me what my doctoral dissertation was about. After a moment of thought I took a breath and was ready to say some sentences about it: "It's about moral and economic values.". But before I was able to pursue my friend knit his brows and interrupted me: "Come on Marco, everyone knows that business is business! When money comes into play morals are no matter."

Probably without knowing it my friend had embraced the point of view of classic economic models. These models characterize people as rational optimizers who arbitrage in favour of the optimal solution (technically speaking the equilibrium distribution). Arbitrage is a process in which the existence of an opportunity for a net gain (the benefits of an action outweigh the costs) results in behaviour that causes that opportunity to disappear. At supermarket checkout lines people see a short line and move to it. This lengthens the short line while shortening the long line until all lines are equal and there is no incentive to move to another line.

Homo oeconomicusis is the name of the concept of human beings solely motivated by the pursuit of their own self interest. The economic man was first introduced by Pareto (1904). There is no clear definition of self interest of the economic man - nor how it is different from morals? Adam Smith, the father of modern economics, wrote in his "Theory of Moral Sentiments":

> How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it.
>
> (A. Smith, 1790)

Since then authors criticized the strong interpretation of the economic man and the underlying principle of perfect rationality. One of the earliest critics was Herbert Simon (Simon, 1997). Simon notably coined bounded rationality: Human beings are rational but bound to availability of information, time and cognitive resources. Later Amos Tverski and Daniel Kahneman, have stressed the important role of heuristics in human problem-solving and the

resulting failures of rationality (A. Tversky & Kahneman, 1983; a. Tversky & Kahneman, 1974).

Even more recently research has documented situations in which people resist to trade offs between fiduciary values and moral values (A. P. Fiske & Tetlock, 1997). It is, for example, hardly conceivable for most people to sell their wedding ring, even if the price offered exceeds the value of the ring: Moreover, people react with backslash and consider the offer as an offense (Tetlock, 2003). This also happens when companies market green products without real commitment (Crane, 2000).

But what does the observation that people have other than financial values imply for social responsibility? One implication lies in the answer to question of who should correct "immoral" behavior. Asked how to tackle challenges, like pollutions, income or wealth inequality my friend at dinner argued that government is in charge. Again his thought was in line with an economic pioneer: Pigou (1920).

But all people care about morals and others than government are initiating against some of those challenges. Likewise, the movement of CSR is gaining momentum, especially with the rising importance of non governmental organizations, fair-trade and SRI.

All those examples illustrate that our societies are eager to change the values that drive economic decisions. Op-ed commentary, election campaigners and best seller authors all agree that once again human sinners have come to praise the golden calf and need to return to more genuine values. Only the suggested remedies differ.

This dissertation addresses the social demand for new ways in dealing with economic questions from a psychological perspective. It selects particular situations in which economic variables are at stakes with moral issues. It then investigates the psychological mechanisms and motivations present in those situations and empirically derives original practical solutions. Simply put this dissertation aims to provide tools that allow scholars and practitioners to effectively assist socially responsible behavior initiated by individual people and organizations.

3

SITUATIONS INVOLVING SOCIAL RESPONSIBILITY

For the interested reader a detailed account of the main CSR theories, namely Corporate Social Performance (CSP), Shareholder Value (SV), Stakeholder Theory (ST) and Corporate Citizenship (CC) is given in Appendices 9.1. However, given the complexity of those theories and for the sake of clarity, the following section is limited to accounts of the situations studied empirically and their immediate relationships with aspects of CSR.

3.1 SOCIALLY RESPONSIBLE INVESTMENT

The first phenomenon in which people initiate social responsibility is SRI. SRI is a movement that has gained momentum in recent years. Precisely SRI seeks to integrate extra-financial concerns in the investment decision process. Those extra-financial concerns are often based on value systems as for example the protection of the environment or the promotion of social well being. We shall see later that values and practices within the field are heterogeneous. However there is a clear distinction to conventional investments who only consider financial indicators.

SRI has become more and more important during the last ten years. The total amount of money invested in SRI funds has grown exponentially, both in the United States ("2007 Report on Socially Responsible Investing Trends in the United States", 2007), and in Europe (Marion de Marcillac, 2008). Today one out of nine USD under professional management invests in SRI In The United States. In Europe and Australia SRI growth rates are higher then growth rates of traditional investments (Hoepner & Mcmillan, 2009). In the Unites States assets under classical management grew 3% between 2005 and 2007 whereas assets under socially responsible management grew 18%. Eurosif reports that in the same time assets under responsible management in Europe doubled and broke the €2 billion barrier. Further, in 2009 German institutional investors expressed their intention to increase their capital under socially responsible management over the coming years.

In the following paragraphs I provide (a) a brief history of SRI (b) the generally accepted definition of SRI (c) a review of the different practices and actors in the field; (d) the relation to peoples trust in investment funds.

3.1.1 *(a) History of SRI*

The origins of SRI go back hundreds of years and seem to be closely linked to religious concerns. In early biblical times the Jewish laid down directives about investing ethically. Passages about the proper use of money are everywhere in the new testament. Since the 18th century generations of religious investors in the United States avoided companies that profit from sales of products designed to kill on enslave human beings. Even today the deep religious origins of SRI manifest in the widespread avoidance of "sin stocks" - companies in the alcohol, tobacco, or gambling business.

But the modern roots of SRI are the 1960s. During that decade a series of themes like the anti-Vietnam war movement, civil rights concerns, cold war or equality for women, made their way into accountability. Later, in the 1970s, investors included labor issues, and anti nuclear sentiment. In the 1980s, the SRI movement gained support from a wider public pressuring the white minority government of South Africa to dismantle the racist system of apartheid. Then, with the Bhopal, Chernobyl and Exxon Valdez and public awareness of global warming and ozone depletion, environmental concerns moved to the forefront of the socially concerned investors' minds. More recently globalization issues of human rights and working conditions became drivers for people with dual motives for their capital.

3.1.2 *(b) Socially Responsible Investment Today*

The notion of SRI is far reaching and sometimes controversial. It is now widely accepted amongst practitioners and academics that SRI is the the integration of non-financial concerns, for example ESG values, into the investment decision process. Domini (2001) state that SRI means *integrating deeply held personal or moral concerns into the investment decision-making process* . (P. Kinder, Lydenberg, & Domini, 1993) see it as *the implementation of political objectives in investment decisions*. Brill and Reder (1993) evoke *means money management, and investment decisions made according to both financial, and ethical criteria*.

Nevertheless, beyond this point of consent, a significant heterogeneity of concepts reigns within the SRI movement (Sandberg, Juravle, M, Hamilton, & Hedesström, 2008). This is best shown in the heterogeneity of terms used to describe SRI. For example the United Nations Principles for Responsible Investment (UNPRI) is an investor led initiative that set forth voluntary guidelines for investment entities wishing to address ESG issues. Besides

this common set of principles the UNPRI signatories use a wide range of terminology: SRI (43%), sustainable investment (10%), responsible investment (9%), sustainable and responsible investment (5%), ethical investment (3%), socially, and environmentally responsible investment (2%), governance and SRI (1%). Only three European (and no US) institutional investors use the term 'ethical investing' (Sandberg et al., 2008). The use of the term SRI is, partly, justified by this large popularity in the US and EU (43%) but also because it implies an investment process that allows for multiple strategies.

3.1.3 *(c) Types of social investors and investment practices*

Whereas previously SRI was intimately tied to religious motives an up to date taxonomy of who invest in SRI cannot hold within secular aspects. The question of who are SRI investors leads to a distinction of three types of people (P. D. Kinder, 2005):

- *Value based people*: These people act in accordance with religious or moral views. The main driver of their decision to include non-financial criteria in the investment process is the desire to have investments that are consistent with their moral beliefs. Religious institutions that practice SRI fall into this category. Secular organizations (eg. pension funds) that focus on values like the environment or human rights also fit into this category.
- *Value-seeking people*: Value-seeking people use social and environmental data to enhance portfolio performance. Financial scholars have paid great attention to the performance of SRI funds relative to conventional investments (Derwall, 2007; Bauer, Derwall, & Otten, 2007; Goldreyer & Diltz, 1999; Hamilton, Jo, & Statman, 1993; Hoepner & Zeume, 2009; Rennebog, Ter Horst, & Zhang, 2008; Schroeder, 2007; Fisher & Statman, 2002a; Gregory & Whittaker, 2007; Luther, Matatko, & Corner, 1992; Luther & Matatko, 1994; Mallin, Saadouni, & Briston, 1995; Cortez, Silva, & Areal, 2012) and the controversy is still ongoing. However the financial out-performance argument has a considerable amount of adherents.
- *Value-enhancing people*: This set of people use shareholder activism techniques to enhance investment value, and focuses primarily on corporate governance. CalPERS, a Californian pension fund is an example of an institutional value-enhancing investor.

Value based people are best described by ST (cf. Chapter 9.1.3 and CC (cf. Chapter 9.1.4. Due to their belief in financial advantages that are obtained through SRI the other two categories fit into CSP (cf. Chapter 9.1.1.

For elaborateness's sake I also describe the SRI investment process according to the practices in SRI. The following six statements point out the main technical approaches in SRI in order to clarify the definition Crane (2008):

- First, all SRI includes into the investment decision process, over and above considerations of financial risk and return, some combination of moral religious, social, and environmental concern. This point is similar to the broad definition and conceived as the cornerstone of the building blocks of a more precise definition.
- Second, a significant number social investments construct portfolios using a process known as negative screening. Negative screening is a systematic method of excluding objectionable investments according to decisions rules established beforehand. One common decision rule is to exclude companies involved in tobacco, alcohol, or gambling. The religious roots of negative screening immediately come into mind. But negative screening has broadened its scope, and is also used for other values.
- Third, some SRI seeks to include companies with notably positive social records in their portfolios in a process known as positive screening.
- Fourth, SRI might seek to change companies' behaviour via proxy resolutions and negotiation with management, a process known as shareholder activism.
- Fifth, the best in class approach compares the social performance of assets in a specific sector to select only the investments with the best social records[1].
- Finally SRI may also refer to investments that bypass traditional channels and have a high social impact. This is often termed community investment, but may also take the form of micro-finance (small loans to entrepreneurs, usually in developing countries), social venture capital, or community lending (bank lending focused on low and moderate-income communities).

3.1.4 *(d) Effects on trust*

Whereas the historical, social and demographic drivers of investing in SRI funds are well documented this dissertation focuses on personal motivations and the effects SRI can have on trust. Trusting others is a central component in human life. Research shows that it is essential for stable relationships, fundamental for cooperation, vital to exchange, and necessary even for routine of everyday interactions. In organizations, like financial institutions, trust is important at interpersonal, and institutional levels. Trust becomes a vital concept when there are significant risks involved in trusting (i.e., vulnerability) and when there is objective uncertainty about future consequences of trusting.

1 I defer a more detailed account of this approach to the section focusing on the French SRI market.

Chapter 4 studies peoples' perceptions of SRI funds. Investing in mutual funds is risky and trust is vital for people to leave the power over their saving to someone else. The economic turbulence encountered since 2008 have resulted in historically low trust in financial institutions. Chapter 4 tests the prediction that SRI can help foster trust in mutual funds through the increased similarity in values that theses funds have with people. The method is and implementation of experimental designs in a management context.

3.2 SOCIALLY RESPONSIBLE REMUNERATION

The second situation in which there seems to be a popular desire for more social responsibility is remuneration for work. Modern remuneration plans are often so complex and arcane that they produce considerable worries to people who deal with them on a daily basis. Remuneration systems are often tedious, yet essential to modern society: They appear, in different forms, in all industrialized countries.

The primary objective of remunerations is generally linked to economic efficiency. Nevertheless men are alert to factors of social justice within remuneration plans. Moral aspects, such as compensation for bodily injury, have existed in virtually every civilization. This historical perspective, outlined in the following paragraphs shows that the draftsmen of remuneration plans have always been keen to also include goals linked to social justice.

3.2.1 *Historical Perspectives on remuneration*

The history of compensation for bodily injury begins shortly after the advent of written history itself (Guyton, 1999). An ancient Sumerians outlined laws that provided monetary compensation for specific injury to workers' body parts, including fractures (Kramer, 1988). Later, the Babylonian law code (code of Hammurabi from 1750 B.C.) provided a similar set of rewards for specific injuries and their implied permanent impairments. Ancient Greek, Roman, Arab, and Chinese law provided sets of remuneration schedules, with precise payments for the loss of a body part.

For example, under ancient Arab law, loss of a joint of the thumb was worth one-half the value of a finger. The amount of the length lost was the compensation for penis injuries, and the surface area for ears. All the early remuneration schemes consisted of "schedules" such as this; specific injuries determined specific rewards. The concept of an "impairment" (the loss of function of a body part) separate from a "disability" (the loss of the ability to perform specific tasks or jobs) had not yet arisen.

Later the development of English common law in the late Middle Ages and Renaissance provided a legal framework that persisted into the early Indus-

trial Revolution across Europe and America. Three critical principles gradually developed which determined what injuries were to compensate:

1. **Contributory negligence**. The doctrine of contributory negligence held the employer was not at fault if the worker was in any way responsible for his injury. Any worker who slipped and lost an arm or leg was not entitled to remuneration. Regardless of how hazardous the exposed machinery of the day was.
2. **The "fellow servant" rule**. Employers were not held liable if the workers' injuries resulted in any part from the action or negligence of a fellow employee under the "fellow servant" rule.
3. **The "assumption of risk"**. The doctrine of "assumption of risk" was exceptionally far-reaching. It held simply that employees know of the hazards of any particular job when they sign their contracts. Therefore, by agreeing to work in a position they assume any inherent risk it carries. Employers had to provide the safety measures considered appropriate in the industry as a whole. In the nineteenth century, this often left a great deal of interpretation. Assumption of risk was often formalized at the beginning of an employees' tenure; industries required contracts in which workers abdicated their right to sue for injury. These became known as the "workers' right to die" or "death contracts".

The landmark events in the development of modern workers' remuneration occurred in Prussia under the leadership of Chancellor, Otto von Bismarck. His first foray into the field was through the Employers' Liability Law of 1871, providing limited social protection to workers in certain factories, quarries, railroads, and mines. Later, Bismarck pushed through Workers' Accident Insurance in 1884 creating the first modern system of workers' remuneration. Over the next years followed Public Pension Insurance providing a stipend for workers incapacitated due to non-job related illnesses and Public Aid providing a safety net for those who were never able to work due to disability.

The system as a whole valued active workers; Workers received the greatest benefits, medical care, and rehabilitation for job-related injuries. The state-administered Prussian system also established an important precedent: it was an "exclusive remedy" to the problem of workers' remuneration because workers were unable to sue employers through the civil courts under the system.

Societal demand for justice in remuneration plans persists. However research has neglected the question of how people judge the acceptability of modern compensations. The empirical studies in Chapter 5 patch this lacuna focusing on socially responsible remunerations.

Chapter 5 studies executive bonuses, executive compensation plans and general remuneration plans within companies in a French context. From a com-

panies perspective fair and adequate remuneration is critical to motivating employees, hiring and retaining competent employees. In determining adequate remuneration for employees, from a companies perspective remuneration managers usually consider the three major factors: the labor market, the nature and scope of the job, and characteristics of the employee. From a societies perspective fair and adequate remuneration is vital for maintaining positive social climate. For example many remuneration policy restrictions (like salary caps or minimum wages) have been introduced from governments and multinationals with the intention to prevent excesses.

3.3 WINDFALL GAINS

Last I consider a situation of undeserved windfall gains and how people react to them. A windfall gain is a benefit someone has received without expecting or deserving it. A well known example from the business world are the profits of US Oil companies that ensued form a sudden sharp increase in Crude Oil prices due to the OPEC oil Embargo in 1979. The profits big oil companies made were not due to technological innovation or some other competitive advantage they had gained through an intelligent business strategy, but rather the coincidental by-product of a political crisis. Interestingly the political reaction to these windfall gains was the US Crude Oil windfall profit tax enacted in 1980. This tax intended to increase tax rates on the profits mainly because Congress felt that the industry was not paying its fair share on federal taxes.

Other examples of windfall gains are subsidies, that is financial assistance given to support the development of a particular industry or individual behavior (eg. common agricultural policy in Europe, Chinese solar subsidies, child allowances in most countries), heritage or gambling gains.

3.3.1 *Spending windfall gains*

The primary behavioural result about windfall gains is that people tend to spend them more easily [2]. A likely explanation of this fact is one of psychologies best documented effects: "Loss aversion" (A. Tversky & Kahneman, 2009). Simply put this effect states that people tend to overweight the value of their losses and underweight the value of their gains. In other words the psychological distress from losing 100$ is superior to the psychological relief from gaining 100$.

By extension this effect can be observed when people place values on objects they own. In an experiment Carmon and Ariely (2001) organized a lottery amongst graduate students at their university. The prize were tickets for the

2 Anecdotally we are regularly reminded of when we read about lottery winners who end up loosing their new fortune.

university football championship finals (probably the most important game of the year and there were obviously less tickets then students). After the lottery they contacted both, students who had won tickets and and those who did not. Those who had won were asked for how much they would be willing to sell the tickets, and the others were asked about the price they were willing to pay for getting tickets anyways. The impressive finding is that the hypothetical selling price was 14 times higher that the hypothetical paying price.

Technically speaking the way in which an object is endowed influences the value that people attach to it. People who are rewarded with an object due to exemplary performance tend to value the object more highly than people who obtain the same object based on either chance or poor performance. Likewise windfall gains, such as unexpected tax rebates, lottery winnings, or inheritances, are spent more readily than other assets, presumably because they are valued less.

3.3.2 *The choice people face in our studies*

The choice people face in the studies in Chapter 6, however, is concerned with revealing windfall gains to others and not so much concerned with spending them. Indeed, when others come to know about windfall gains this often triggers adverse feelings like envy. For example people often begrudge windfall gains to Lottery millionaires and subsidized industries.

Chapter 6 studies a situation in which people can reveal (or not) benefits they have received without deserving them to others. The question that is raised is whether the decision relies on classical cost-benefit analysis as first proposed by Garry Becker or whether psychological mediators different from monetary incentives do play a role.

The abstract situation under study is that someone has received an undeserved benefit and can now decide whether she wants the others to know about this, or not. Concretely this could be applied to many situations: Executives who receive excessive bonuses may or may not want to communicate about them. Anyone who has already received an erroneous invoice or wire transfer dealt with the question of speaking about it.

Findings about the drivers of revealing undeserved benefits to others could find applications in government and business policies. In Europe for example, some people have inherited large sums of money on Swiss bank accounts on which they pay only marginal taxes. If politics of other countries want to encourage them to repatriate this money, should they rather provide them with monetary incentives or appeal to their values base on social norms? Another example are people who profit from loopholes in social security systems and perceive legal but undue subsidies. Again the question is whether the most efficient way to encourage them to make those windfall

gains public are monetary incentives or appealing to their personally held values.

In many regards this research relates to Ariely's work on honesty and cheating (Ariely et al., 2011; Ariely, 2012). In this research program it has been documented that people generally cheat (in the most famous experiment they over-report their correct answers in math tests) but just a little: As much as they can still think of them selves in a positive way. The main result being that cheating is not influenced by increased rewards or a higher probability of being discovered but rather by appealing to moral values. The main difference with the situation we study is that cheating can be considered morally condemnable whereas in our situation the moral fault incurs to the experimenter. Just like the Swiss bank account was opened by the parents and subsidies are provided by the state.

To summarize, this dissertation studies three situations that involve moral and economic aspects and that are relevant for CSR theory and practice. Chapter 4 is concerned with the decline of trust, during and after the economic turbulence of 2008, and the advent of SRI funds. Chapter 5 explores what kind of remuneration systems are socially acceptable. Chapter 6 is concerned with peoples reactions to windfall gains and the question of what drives people to reveal, or conceal, undeserved benefits to their peers.

Before turning to empirical investigations of the three situations described above Chapter 3.4 discusses the four main theories of CSR and reports theoretical implications for each of the situations.

3.4 PSYCHOLOGY AND CSR

CSR theories describe what companies are doing, and to some extent what they should be doing (cf. Appendices 9.1). While the practices of many companies in the USA, for example, are probably better described as following SV theory, others, perhaps in Europe or Japan, might better fit the stakeholder model. SV requires companies to comply with fiduciary duties towards shareholders - consequently the moral questions are dealt with by the legislator. CSP theory also calls companies to follow public policy makers adding the notion of a long run competitive advantage of responsible companies. ST goes further and adds a moral liability: companies are liable towards the stakeholder defined as a person with interests in regards to the actions of companies. CC aims at institutionalizing spontaneous socially responsible practices by business leaders by granting citizenship (a concept usually granted to individual persons) to organizations. Citizenship then comes with duties that are defined by international standards (e.g. UN Principles).

Contrasting the precision of CSR theories in describing the structural mechanisms of social responsibility, scholars have rarely looked at psychological

drivers of social responsibility. The development of social responsibility in the business world is a recursive process and depends largely on how individuals interact with larger organizations throughout the process. A better understanding of peoples' motivations, beliefs, and perceptions in those interactive situations, contributes to the toolbox of those engaged in promoting social responsibility.

Research in psychology has focused on drivers of pro-social behaviour, and found that there is a good part of social image motivation (Ariely, Bracha, & Meier, 2009), self-image concerns (Mazar & Zhong, 2010; Mazar, Amir, & Ariely, 2008) and framing of the decision (Davidai, Gilovich, & Ross, 2012; Gino, Norton, & Ariely, 2010) to it. One limitation of those studies, however is that the experimental situations under study rarely apply to situations in business settings. Most dependent variables fall into one of the following categories: donations (organ, blood, NGOs), cheating in tests (anagram, trivia quiz, maths exercise), or consumer choices of green products.

The empirical works presented in Part ii attempt to converge CSR theories, and psychological research on pro-social behaviour. This attempt is guided by the concern to investigate situations that are relevant for corporate decision making, and at the same time subject to influences of psychological factors. The resulting psychologically informed view of CSR may seems more accurate in prescribing genuine, and effective, actions in support of CSR practices.

The work on SRI in Chapter 4 evolves around the argument that financial institutions can adopt SRI to mend the reputational damage they have suffered during the crisis. SRI thus becomes a tool for banks to restore a climate of trust amongst customers. Success in this enterprise is highly dependent on people's perceptions of the different values carried by SRI. The psychological factor linked to those values is value similarity between the investor and the fund. Chapter 4 explores, how differences in values, and similarity of values affect investors perceptions of fund trustworthiness, and investment decisions.

Chapter 5 tackles another important decision businesses have to make: The remuneration systems they adopt. As expressed by regular media coverage people have different views on executive remunerations, and in particular bonus payments. In general there is a public outcry about high, and unacceptable compensations, which in turn, raises the question of how people conceive acceptable remunerations. To address the public outcry, legislators have debated salary caps, and companies have revisited incentive structures. However, from a CSR perspective the question addressed in Chapter 5 seems more important: How do different variables on which a company can act, influence social acceptblity of remunerations.

Little is known about how people value corporate actions. In the case of remuneration policies fair distribution seems to be important (ie. of value) for many people. Study 5 uses functional measurement to contribute a cog-

nitive mapping of peoples' acceptability of remuneration plans and executive bonuses. A thorough understanding of socially acceptable remuneration policies allows to create value for society and help mitigate adverse feelings towards executives.

Another point is that the CSR theories tell little about how personal values influence decision making. Consider, for example, CC theory which is tied to universal standards and claims of universal rights. Even proponents admit that it lacks concrete knowledge about those personal values (Munshi, 2004). Chapter 6 builds on psychological research on universal values (Tetlock, 2003; Ritov & Baron, 1999; Caldwell & Dixon, 2009; A. P. Fiske & Tetlock, 1997) and provides a more detailed view on truth telling or the personal value of revealing undeserved benefits. Telling other about undeserved benefits is of a particular interest to companies since it can be linked to principles like transparency, reputation or implicit contracting.

Part II

EMPIRICAL STUDIES

4

SOCIALLY RESPONSIBLE INVESTMENTS

4.1 INTRODUCTION

There seems to be a general lack of trust. The turbulent years since the burst of the US housing bubble in 2008 have filled the newspapers with stories about greedy executives, corruption, incompetence and general misconduct. From bankers to executives, from media to politics, all have left the public with scandals causing anger, disillusion and ignominy.

After the subprime crisis was at its highest point, chief executives pocketed horrendous bonuses right before their institutes applied for government bailouts in the US and Europe. Stan O'Neill left Merryl Lynch with a $165 package as the company posted $8 billion in losses. Charles Prince retired from Citygroup after only four years in the company and a poor 3rd quarter performance. He took nearly $100 million with him. In October 2008 Richard Fould sold the house he bought four years ago for $14 million house to his wife for $100 in order to protect the house from potential legal actions.

In 2011, the News International phone hacking scandal reveals that employees of British newspaper News Of The World listened to discussions by illegally accessing mailboxes, they are further suspected of having bribed police officers. In consequence of the scandal, James Murdoch, executive of News Corp. Europe and Asia, announced the closure of the, at one time the biggest selling English language news companies in the world. In December 2011 German president, Christian Wulff, made public excuses for having received a zero interest loan from the wife of business man Egon Geerkens. Just when the affair seemed to settle down, it was revealed that he had applied undue pressure on the journalists to prevent initial uncovering of the loan.

These anecdotal cases are in contradiction to what CSR theories would consider responsible. Excessive CEO bonuses violate CSP's individual principle (cf. Section 9.1.1), and while they were not int the interest of stakeholders (cf. Section 9.1.3) many shareholders seem to believe that they are in their best interest (cf. Section 9.1.2). While Wulffs zero interest loan (granted by a private entrepreneur) was conform with legal requirements, SV theory's principle of corporate effects as well as CSP's power principle would have required omission.

If the public opinion is driven by anecdotal events like the ones described above it is likely that people react with distrust. And polls show that in most western countries trust in business and government to do what is right is low. People aged between 25 and 64, answered the question "How much do you trust business to do what is right?" below the 50% mark in France (48%), the US (46%), UK (44%) and Russia (41%). Answers to the question "How much do you trust government to do what is right?" paint an equally bad picture in France (49%), Italy (45%), India (44%), the U.K. (43%), the U.S. (40%), Russia (39%) and Germany (33%) (*Edelman Trust Barometer 2011*, 2011).

In recent polls people were asked what measures a business could take in order to restore its trustworthiness. Amongst the top answers were: "treating employees well", "having transparent and honest business practices", "communicating frequently and honestly" and "making progress on environmental initiatives". Those answers are all from the field of CSR. In comparison answers that topped the ranking some years earlier ("increasing profitability and performance", "increasing shareholder value" or "protecting profit margins") referred to financial aspects (Edelman, 2010). This suggests that today, to trust a company, CSR has become even more important to people than higher performance.

Experimental data paints a similar, but somewhat more precise picture. Data clearly support a link between perceived morality and trustworthiness. Bews and Rossouw (2002) demonstrated that executives could influence trust by adopting a set of moral interventions, procedural transparency, trust training, adequate communication or improved employee care. Also, several cause-related marketing studies have demonstrated that social ini-

tiatives of companies result in positive affective, cognitive, and behavioral responses by consumers (T. J. Brown & Dacin, 1997b; Creyer, 1997; Ellen, Mohr, & Webb, 2000; Folkes, 1988; Murray & Keith, 1997; Sen & Bhattacharya, 2001; Becker-Olsen & Hill, 2006).

Also the immediate economic consequences of distrust may be short lived they could be devastating in the long run. Because trust is a key element of the concepts of social capital which, in turn, contributes to economic development. The core idea supported by social capital proponents is that the quality of social interactions can affect the productivity of workers and groups, just like physical capital and human capital do. A one-standard deviation increase in a survey-based measure of country-level trust increases economic growth by more than one-half of a standard deviation (Knack & Keefer, 1997) and across countries, a one-standard deviation increase in the same measure of trust increases judicial efficiency by 0.7 of a standard deviation and reduces government corruption by 0.3 of a standard deviation (La Porta, Lopez-de Silanes, Shleifer, & Vishny, 1997).

Those long term effects could be empirical underlying of a concept around the need for social support in CSR theories (cf. Section 9.1). The basic idea of this concept is that companies require social support in order to be profitable in the long run. The organizational principle (cf Section 9.1.1) expresses this vision most clearly but it is also present in ST theory. SV theory does not say very much about this. The only doctrine being to increase shareholder value, formal proof of negative long term effects from a loss of trust would certainly be considered as an indication that trust needs to be reestablished by management. However those long term effects are often difficult to measure and may intermingle with cyclical factors.

Evidence of a long term effect of trust comes from, political economist Fukuyama (1996). Observing a difference between company dimensions in developed countries close to each other he explained this difference with trust. In Germany and the USA company structures are bigger then Italy or France. In Japan and Korea they are a lot bigger then in Hong-Kong Or Taiwan. The size of the nations cannot be the cause since there are huge companies in the Netherlands or for example in Sweden. Korea and Taiwan are of almost equal size. He then observes that in countries with small company sizes, people are unable to establish trusting relationships with people who are not member of their family. His argument is simple: If people do not trust each other only the state can construct society and build large companies, if people do trust each other they create solid and complex relationships between each other and these relationships favor economic development and democracy which are tied together.

Following this evidence and CSR theories actors of our societies economic, and in particular financial development, do have a social responsibility to foster trust on a general level. Public trust needs moral values to build up on and, as trust is more difficult to gain than to loose, it will take more then

loose promises. SRI funds could make a substantial contribution to foster trust. Those funds include moral values in the investment decision process and constitute a quickly growing asset class increasingly attractive. If used properly without abuse, SRI funds might polish the image of financial institutions for the generations to come.

The next section provides a more detailed view of trust, its economic virtues, theoretical approaches to it and trust measurement methods. Then the field of SRI, its historical roots and recent developments, investor types, the methods used in the SRI process and specificity of the French SRI market are described.

4.2 TRUST

Confidence in or reliance on some quality or attribute of a person or thing, or the truth of a statement.

4.2.1 *The Importance Of Trust*

Imagine you are driving in your car and suddenly hear a strange noise. Intrigued you will drive to the garage and ask a mechanic about it. The mechanic then will check what is wrong with your car and establish a cost estimate for you and repair the car once you both agree on the price. Finally you will have to settle the bill before you can leave and drive you car safely again.

The story described in these few lines is very common and we all experience similar situations in daily life. Yet, we hardly realize how important mutual trust is in social interactions like this one. When you bring your car to the mechanic you both have to trust each other in several ways. First, You will need to trust in his expertise and competence of being able to repair cars in general. Second, You need to trust him to be a honest person. Since you do not have a clue about the mechanics of your car he could charge you a lot more then the actual cost of repairing. Third, he will have to trust in your explanations about the noise: Was it rather shrill, hull or rasping? Right or left side of the car? All these information will help him to detect the problem quickly. And fourth, he will finally have to trust you to settle the bill, because, who knows, you might be broke or worse a credit-cheater.

Just imagine the whole situation without the trust between both parties. You would probably start by inquiring about different garages and their reputation, then having narrowed down the number of garages you would still bring your car to several garages in order to compare the diagnostics and estimates before finally leaving your car. The mechanic in turn would would dismantle the whole car since what you told him about the noise is just not

trustworthy. But before he even starts to work on your car you will have to advance, in cash of course, the amount of the repair.

If you think about it, trust is the groundwork of peaceful social interaction and a cornerstone of modern societies (Kohn, 2008). Certainly, democracy comes with duties and our society's leaders will have to foster mutual trust whenever and wherever possible (O'Neill, 2002). Trust is of particular interest to society as a whole (Earle & Cvetkovich, 1995), organizations (Currall, 2003; Hart, Capps, Cangemi, & Caillouet, 1986; Mishra, 1996; Schoorman et al., 2007; Enz, 1988; Mayer, Davis, & Schoorman, 1995), physicians and medical institutions (Hall, Dugan, Zheng, & Mishra, 2001), marketing and consumer product responses (T. J. Brown & Dacin, 1997a; Morgan & Hunt, 1994; Doney, Cannon, & Hobbs, 1997; Morgan & Hunt, 2010; Moorman, Deshpande, & Zaltman, 1993, 2010), close and romantic relationships (Wieselquist, Rusbult, Foster, & Agnew, 1999), leadership (Dirks & Ferrin, 2002) and psychological personality measures (Robinson, Shaver, & Wrightsman, 1991). People need to trust, into each other, in their superiors and leaders, in the ones they supervise or educate and finally in themselves.

Economic activity is particularly sensitive to trust and governmental authorities in many countries periodically issue measures of consumer trust (Jansen & Nahuis, 2003; Lemmon & Portniaguina, 2006; Fisher & Statman, 2002b). For example the Consumer Confidence Index, a household survey, is published by the United States, India, the Republic of Ireland, Canada and Indonesia. Similar constructs exist in virtually every country. Private companies also have found a business in selling various indicators and analysis of global or country specific trust. The "Edelman Trust Barometer" for example is published annually with regular update throughout the year. Surveys such as the General Social Survey (GSS) and the World Values Survey (WVS) also yield attitudinal trust measures.

Scholars have argued that trust is an element to every commercial transaction conducted over a period of time, and that much of the economic backwardness in the world can be explained by lack of mutual trust (K. J. Arrow, 1972). Trust has been shown to be a social capital that contributes to, and even predicts, economic growth in sociological (Coleman, 1988) and economic studies (Fukuyama, 1996; Putnam, Leonardi, & Nanetti, 1993; Francois & Zabojnik, 2005). There is some evidence that the effect is mediated through trusts virtuous effects on risk taking and cooperation (Durante, 2010; Tu & Bulte, 2010) and that it is independent from religious beliefs and ethnic origins (Alesina, 2002).

Knowing of the importance of trust for society as a whole and specifically for economic well being sets it on the agenda of our leaders and decision makers. I have argued that many have already become aware of the importance of trust and that the use of trust metrics has become a standard. However simply monitoring the state of trust, in a given society or organization, is merely scratching on the surface. In order to begin acting on trust

a well conceptualized approach is much needed. The following section will outline models of trust with a particular focus on psychological aspects.

4.2.2 *Trust Theory*

The psychological foundations of trust have interested researchers in game theory, e-commerce and risk communication (Twyman, Harvey, & Harries, 2008). In behavioral game theory various types of games are used to study the type of situations that influence on how much trust people are willing to place in another person. Models based on data from experimental studies have made valuable predictions and been widened to different labor markets (Ernst & Gächter, 2000) and organizational structures in real companies. Because customers must trust the business holders of online shops to deliver the goods and services that have been paid for researchers have studied electronic commerce. These studies have investigated relations between website characteristics, consumer's ratings of trust in online shops and probability of purchase. Finally, in the field of risk communication the determinants of trust have been studied. In order to manage risks like for example car accidents, governments can rely on legislation, for example laws against using mobile phones while driving, or communication campaigns on the levels of risk associated with mobile phone use while driving (Siegrist, Earle, & Gutscher, 2003).

Going beyond psychological aspects, the integrative model of trust (Mayer, Davis, & Schoorman, 1995) is well established and has drawn on perspectives from multiple disciplines. It draws from the psychological literature that trust is a matter of perception and consequently defines trust as *the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustee, irrespective of the ability to monitor or control that other party*. First published in 1995, it has been applied to management and marketing accounting, finance, economics, information systems, industrial engineering, political science, communication ethics, law, psychology, sociology, health care and agribusiness (Schoorman et al., 2007).

Approaching trust from a perceptional perspective allows to identify the factors that make the trustee trustworthy. The traits and characteristics that entitle someone to be perceived as trustworthy are defined as the antecedents of trustworthiness and the model counts three of them: *Ability, Benevolence, Integrity*.

Further, ability is the group of skills that enables someone to have influence in a specific domain. It hat to be thought of in terms of competences and expertise, for example someone could be perceived as trustworthy for his engineering skills or his employee management skills. Benevolence, is the extent to which someone is perceived to want to do good to the trustor, besides egocentric profit motives. It implies a particular attachment a positive

orientation of the trustor towards the trustee. Integrity, is the perception that the trustor sticks to a number of principles as a whole that are important to the trustee.

Integrity is of particular importance for the purpose because it introduces a moral dimension (Bews & Rossouw, 2002) to trust. If the trustor simply adheres to a set of principles and takes all his actions according to these values this is not sufficient for that he is perceived as integer by the trustee. If a person, for example, swears by cheating in card games and puts cards up his sleeves, makes bum deals and peeks at his opponents play he would not be labeled integer simply because of the negative moral value of taking the other players for a ride. The decisive point is that the personal values of the trustor must be the same as the personal values of the trustee.

For the sake of detail it has to be mentioned that an open controversy concerns empirical studies having reported strong correlations between integrity and benevolence. Whereas Dirks and Skarlicki (2007) argue for a similar theoretical role of both Schoorman et al. (2007) explain similar the results by the limits of experimental designs. In short, laboratory experiments do not allow for adequate panel data to be collected that could could validate the theoretical specificity of benevolence and integrity found in field studies.

Also notice that competency, openness, concern, reliability and loyalty have been identified to be antecedents of trustworthiness (Mishra, 1996; Hall et al., 2001; Rossouw, 2002), but postpone a detailed description of similarities and interactions between these concepts for clarity's sake.

Within the scope of a thorough review of trust the significant progress in the field of personality factors influencing on trust must be acknowledged. In contrast to the antecedents of trustworthiness those concern the trustee and do not change easily. Increased trust scores seem to correlate with scale measures from the "Big Five" trait taxonomy (Oliver & Sanjay, 1999) as described below.

1. Agreeableness (good-naturedness, cooperativeness and courteousness)
2. Conscientiousness (persistence, determination, hard work, dependability and propensity towards achievement)
3. Emotional stability (being calm, enthusiastic, free from anxiety, depression and insecurity)
4. Extroversion (sociability, friendliness and talkativeness)
5. Openness to experience or resourcefulness (broad-mindedness, creativity, imagination artistic sensitivity and intellectual ability)

4.2.3 *Measuring Trust*

Considering the relative importance of trust for the economic well being of societies, a crucial task for scientific research is the proper assessment of trust in economic situations (Glaeser, Laibson, Scheinkman, & Soutter, 2010). Whereas most of the social capital research relies on attitudinal survey questions, many economic studies have turned towards behavioral measures of trust. I first develop behavioral and survey measures, and then discuss trust measurement used subsequent experiments.

Attitudinal survey questions are typically held close to, or taken directly from the General Social Survey. For example they read: *"Generally speaking, would you say that most people can be trusted or that you can't be to careful in dealing with people?"*. They can generally be divided into questions about attitudes and questions about past trusting behavior. While this type of survey questions have the advantage of a high ecological value, they also are somehow vague and hard to interpret. Questions like this are easily understood and survey respondents are probably familiar with similar questions asked in daily life. However the interpretation of abstract concepts and their relation to trust is not artless. The trust measure interpretation in the example above prescribes trust to being careful in dealing with people. However there could be several other reasons why someone would be careful with others: It might be because of her being anxious or overly protective. Scholars from the social capital research have felt this lack and called for behavioral indicators of trust (Putnam et al., 1993).

Economic games played with financial incentives have since filled the absence of behavioral measures. The trust game (J. Berg, Dickhaut, & McCabe, 1995) has become generally known as the standard behavioral measure of trust and prompted a great deal of different variations. The experiment of the basic version of the game involves two players. One is given an amount of money by the experimenter and has to choose how much of the total amount he is willing to give to the second player as an investment. The amount that is transferred is then multiplied by some factor and now the second player is at the joint: he has to decide about the amount he is willing to give back to player one. From a purely utilitarian perspective player one should maximize his payoff and hand nothing back, however realizing this player one should not make any investment in the first place. In this game the amount of money invested by player one is typically considered as a measure of player ones trust in player two and in return the amount handed back is considered as a measure of player two's trustworthiness.

Another established economic game that measures trust uses "envelope drops". Participants are told that a stamped envelope addressed to the participant and containing €10 will be dropped by the experimenter at the local train station. The participant can now choose between the envelope and receiving immediately €1. the offer is then raised subsequently to €2, €3,...

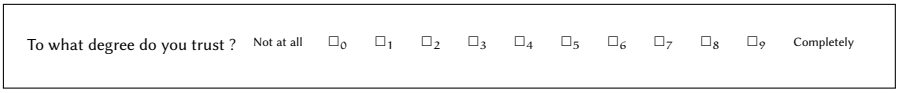


Figure 4.1: A 10-point Likert type scale for measuring trust in a fund.

€10. The €value where people switch to the envelope is considered as a measure of their trust in anonymous people who find the apparently lost envelope at the station. A participant who prefers €2 immediately to the envelope but prefers the envelope to €3, is considered to be more trusting that someone who switches at €8 or €9.

Also behavioral measures are better shielded from subjective bias they are not free of shortcomings. First, behavioral trust measures easily fall prey to the experimenter biases (Rosenthal, 1966). For instance, in the envelope drop experiment a biased experimenter could influence on the decision while presenting the choice between the envelope and immediate payoff, and double blind procedures do not always fit the needs of the experiments. Further behavioral measures external validity is often limited. Trust game experiments usually concern a very specific situation and one cannot be sure that the observed behavior will also occur in other situations.

Both, attitudinal survey measures and behavioral measures have made invaluable contributions and certainly capture large parts of trust. It has been found past trusting behavior, as reported in survey questions, correlates with experimentally measured trusting behavior (Glaeser et al., 2010). Nevertheless for an experimental approach to an applied research the survey method clearly lacks internal consistency whereas behavioral measures lack external validity. I therefore now turn towards a new measure of trust derived from psychological measurement theory.

Linear response scales are frequently used in psychological measurement. Psychologists often use a ten point Lickert-type measure with two end anchors (cf. Figure 4.1). The following section briefly reviews general aspects of psychological measurement scales before discussing the proper use of linear scales.

Response measurement scales can be classified into three categories with regard to the essential aspect of psychological measurement: The relation between the numerical scale of response and the typically unobservable scale of the conceptual quality, in this case trust (Anderson, 2001). The first type of scales are monotone scales. They are also called ordinal scales and express relative magnitude, that means that the scale numbers have the same rank order as the theoretical concept. In learning studies, for example, the number of trials to reach the solution of a given problem is a common measure of learning rate. Monotone scales reach their limits when comparing differences. Suppose that $R\square_1 - R\square_2 > R\square_3 - R\square_4$, one can affirm that the first difference is greater then the second, however this does not hold for the conceptual quantity the numbers measure.

The second type are linear or equal interval scales. In linear scales the observed number are a linear function of the conceptual quantity. Linear scales remove the limitations of monotone scales and allow for comparison of differences (Anderson, 2001), because equal intervals on the number scale correspond to equal intervals on the psychological scale.

The third type of scales are proportional scales, or ratio scales. Their particularity is that the observed numbers are proportional to the unobservable conceptual quantity. Most physical scales are proportional scales, length and mass for example have true zeros. Proportional scales are linear scales with a known zero and therefore not very common in psychological measurement.

Linear measurement scales are essential for quantitative theory (Anderson, 2001). This follows from the multiple determination of perception, thought and action. Without linear scales, analysis of multiple determination is severely limited. This is well illustrated by the compromise between conflicting forces, a common form of behavior. With only monotone scales of the conflicting forces only little can be known of the resultant of the conflict. With only two opposing forces the greater will dominate but nothing can be said about how much. With three opposing forces even the direction of the resultant is unpredictable if only the rank order is known.

Faced with the problem of the relation between the measured number and the psychological concept behind two attitudes are common. The first is to refute the possibility of linear scales in psychological measurement. The argument is that the true measure of the concept is commonly impossible and therefore linearity cannot be guaranteed. The second attitude is to take the measured numbers for their face value, that is assume linearity unthinkingly.

One can argue that linearity in psychological measurement is an issue of good habit and experimental design. A good precaution for using linear measurement scales is to let participants practice with the format before they start responding. This takes the form of a set of practice stimuli that are presented to participants but excluded from statistical analysis. In that way participants can familiarize with the scale before making proper use of it. Another good precaution is to help participants calibrate themselves through the use of the 'end anchors' when they familiarize with the response scale. Calibration consists in presenting participants with extreme stimuli, with responses likely answers to fall at both ends of the scale, providing them with a frame of reference before they judge the target items.

The functional measurement methodology (Anderson, 1982, 2008) is a systematic attempt to solve the riddle of scale linearity in psychological measurement and a detailed description of the issues is defferd to Chapter 3.4 making use of the particular methodology developed within this framework.

4.3 EFFECTS OF VALUE SIMILARITY ON TRUST

As was already mentioned, SRI funds include extra financial criteria, like ESG related issues, in their investment decisions. The field has recently become more and more interesting to institutional investors and private people all over the world ("2007 Report on Socially Responsible Investing Trends in the United States", 2007; Marion de Marcillac, 2008; Hoepner & Mcmillan, 2009). In Europe, the French market has been one of the first to implementing SRI practices amongst institutional investors and private people (cf. Chapter 2).

Further we have seen that trust is an important factor of economic well-being and prosperity (Fukuyama, 1996). Theory and measurement of trust have come a long way since their beginnings.

The following experiments focus on the effects of SRI on trust in mutual funds. Since trust is lost more easily lost than it is gained, and takes time to develop (O'Neill, 2002) the main focus is on the generations to come: University students and young adults.

4.3.1 *The Key Feature of Trust in SRI Funds: Value Similarity*

In light of the poll data on positive effects of ESG on trust the prediction is a positive effect of moral values on perceived trustworthiness of investment funds. More precisely the critical factor for the effect of SRI on perceived trustworthiness will be the *similarity in values* between a given fund and a given investor. As we shall see, this second prediction has a sound theoretical and empirical foundation.

Value similarity is one of the most common features of academic models of trustworthiness. In the Salient Value Similarity model (Earle & Cvetkovich, 1999) shared values are the basis for trust. Mayer, Davis, and Schoormann (1995) defined integrity as the perception that the trustor adheres to a set of principles acceptable to the trustee, and other models introduced very similar constructs (Gabarro, 1978; Hart et al., 1986).

The positive effects of value similarity on trust are documented in many studies. For example, shared values between automobile retailers and automobile suppliers (Morgan & Hunt, 1994), or between top management and employees (Enz, 1988), are beneficial to mutual trust. Value similarity also precedes social trust for products such as pesticides, nuclear power, and artificial sweeteners(Siegrist, Cvetkovich, & Roth, 2000), for the perception of geographic cancer clusters (Siegrist, Cvetkovich, & Gutscher, 2001) and for electromagnetic field risks (Siegrist et al., 2003).

Value similarity will outplay the effects of other known antecedents of trust in the context of investment funds. Among these other antecedents is ability

(Mayer, Davis, & Schoormann, 1995) or competence (Mishra, 1996). With regard to its perceived trustworthiness, however, potential effects of ability are limited for a very practical reason: Investment fund marketing is already almost exclusively based on financial performance, and funds that lose money are unlikely to survive.

Another antecedent of perceived trustworthiness in benevolence (Mayer, Davis, & Schoormann, 1995; McKnight, Choudhury, & Kacmar, 2002) or warmth (S. T. Fiske, Cuddy, Glick, & Xu, 2002). Benevolence, refers to the extent to which the trustee is believed to want to do good to the trustor, aside from egocentric profit motives. In the case of investment fund the "good" done to the trustor would be high return on his initial investment. Since mutual funds are legally bound through fiduciary duty (cf. Siegl (2011) for a recent approach to fiduciary duty in the SRI field), and because fund managers have contractual incentives for financial performance, benevolence in its current definition can be seen as a given (or in need of conceptual clarification) in the context of investment funds.

Lastly, the organizational implementation of value similarity is straightforward in mutual fund marketing, as well as in the investment decision process. From a practitioner's perspective, value similarity is directly actionable in two steps. Once people' personal values are understood they can be used for positive or negative investment screening, or active engagement techniques. Then, in a second step, communication about those values that are similar to peoples' personal values can be honestly adopted in retail bank advisers sales pitches, in press campaigns and fund leaflets.

4.3.2 *A Question of Personal Values*

Value similarity is one's perception that the investment fund adheres to a set of values similar to one's own personal values. This study presents young adults with hypothetical invest fund descriptions that have moral values more or less similar to their own personal values.

The experiments use moral values adopted from the OECD Guidelines for Multinational Enterprises (OECD, 2010). Those guidelines outline recommendations for responsible business and cover a large range of issues from labor and human rights, bribery and corruption to environmental concerns and information disclosure. Because of their extensive coverage of CSR issues, and their general acceptance by the SRI community and government officials, the moral values presented in the experiments are drawn from the OECD Guidelines.

A weak interpretation of the definition of value similarity would expect that because people generally adhere to moral values, any investment fund that show any moral values would be perceived as more trustworthy. A stronger interpretation is that not all moral values will increase trustworthiness in

the same manner. The effect of the values promoted by a fund should depend on the idiosyncratic, personal values of each investor. I thus expect the perceived trustworthiness of a fund to be highly sensitive to the similarity of the values adopted by the fund and the personal moral values of the potential investor.

If this prediction holds, social responsibility cannot only be viewed as a mechanical labeling of funds that will increase people' trust. Such use of social responsibility would, at best, have no effect at all and fail to restore people' trust.

4.3.3 *Comparison Variables*

To better understand the relative importance of value similarity, I compare its effect on trustworthiness to that of *past performance* and *social labeling*. I include past performance as a comparison variable because of its ecological value. It is part of virtually every mutual fund description and varies within single funds (Carhart, 1997), in between funds (Sharpe, 1966) and single investors (Barber & Odean, 2000).

I also compare the effect of value similarity to that of *social labeling*. Social labels are known to impact charity giving (Kraut, 1973) and consumer choices (Loureiro & Lotade, 2005). Yet, the underlying moral values of social labels are often loosely understood by people and might not have the desired effect.

I test predictions in a series of three experiments. In each experiment, I introduce a different manipulation of the similarity in values between the participants and hypothetical investment funds.

4.3.4 *Experiment 1*

4.3.4.1 *Method*

Young adults (22 women and 16 men, mean age = 22, SD = 3) were recruited on the campus of Toulouse University and agreed to participate in the experiment. Participants did not receive remuneration.

Experiment 1 followed a 3 (similarity) $\times$ 2 (past performance) design. The experiment was conducted in individual sessions for each participant. Each session had two phases. Participants first judged different personal values relevant to responsible business conduct. These ratings were used to tailor individual values profiles for each participant. In Phase 2, participants rated the trustworthiness of investment funds descriptions based on those profiles.

The materials used to construct business ethics statements in Phase 1 were randomly selected and adapted from the OECD Guidelines for Responsible Business Conduct: *Respect of workers rights; Respect of environmental concerns; Struggle against corruption; Conformity to national and international laws; Transparency; Respect of public security*. For each item, participants were asked "According to you, how important is the following statement for business ethics?" They responded on a 5-point scale anchored at *Not at all* and *Completely.* There were six target values in Phase 1, introduced in random order among a set of filler items.

In Phase 2 of the experiment, participants rated the trustworthiness of 12 investment funds, whose format was adapted from the Securities and Exchange Commission prospectus requirements. The funds were profitable either 6 or 9 out of the last ten years. The value similarity with each participant was low, high, or unknown (no information about the moral values of the fund). Each fund description appeared twice during the experiment, with a manager of a different gender. The target funds appeared in random order among filler funds. Here is one example of a possible fund description:

> Performance: profitable for **six** out of the last ten years. The fund received the following social responsibility ratings (5 being the best rating):
>
> - Transparency of the selected companies = **4**
> - Respect of environmental concerns of the selected companies = **3**
> - Struggle against corruption of the selected companies = **5**
> - Respect of public security of the selected companies = **5**
> - Conformity to national and international laws of the selected companies = **1**
> - Respect of workers rights by the selected companies = **5**
>
> Management: The manager is in business for 15 years. She graduated from an excellent business school.

Value similarity was manipulated by changing the values of the six social responsibility ratings. In the high similarity condition, these ratings were exactly identical to the ratings that the individual participant gave during Phase 1 when asked about their importance. In the low similarity condition, these ratings were exactly opposed to the ratings that the individual participant gave during Phase 1 when asked about their importance (i.e., the rating in Phase 2 was 6 minus the rating in Phase 1). In the control condition, no moral information was provided about the fund, whose descriptions merely stated that "The fund has not been evaluated by a social responsibility rating agency." After each fund description participants answered the question "To what degree do you trust this fund?" on a 10-point scale anchored at *Not at all* and *Completely.*

4.3.4.2 *Manipulation check*

To validate the manipulation of value similarity, I randomly selected the Phase 1 responses of five participants to the main experiment, together with the Phase 2 funds that were constructed for these particular participants in the low and high similarity conditions. I then recruited 111 additional participants (44 women, mean age = 29) who considered the Phase 1 responses and the Phase 2 funds, and judged the similarity in values between participant (from Phase 1 responses) and fund (from Phase 2 descriptions), on a 10-point scale anchored at *Not at all similar* and *Completely similar*. The manipulation had the intended effect, $F(2, 110) = 29.39$, $p < .001$, $\eta^2 = .21$.

4.3.4.3 *Results*

Value	Mean	SD
Respect of workers rights by the selected companies	4.7	0.5
Respect of environmental concerns of the selected companies	4.5	0.8
Struggle against corruption of the selected companies	4.3	0.8
Conformity to national and international laws of the selected companies	4.2	0.8
Transparency of the selected companies	4.1	1.1
Respect of public security of the selected companies	3.9	1.0

Table 4.1: Importance of responsible business conduct values, as rated by participants in Experiment 1.

Descriptive statistics for Phase 1 of the experiment are shown in Table 4.1. As expected participants generally judged the values as important: Ratings for all items were well above the scale mean. Respect of workers rights and environmental concerns were, on average, judged most important by participants. Transparency and respect of public security, as well as respect of public security of the selected companies, came last in terms of average importance.

Figure 4.2 displays participants' trustworthiness ratings in Phase 2 of Experiment 1. As seen in Figure 4.2, information about past performance is decisive when no moral information is available about the fund: Funds that were profitable for 9 years are deemed more trustworthy than funds that were profitable for 6 years. As soon as moral information is available, though, it plays a central role in judgments of trustworthiness. High value similarity increases trustworthiness, whereas low value similarity even decreases an investment funds trustworthiness.

A 3×2 analysis of variance with perceived trustworthiness as dependent measure (averaging the scores of the two presentations of each fund) confirmed the large role played by similarity in values. Similarity in values (*high, control, low*) and past financial performance (*good, poor*) were entered as

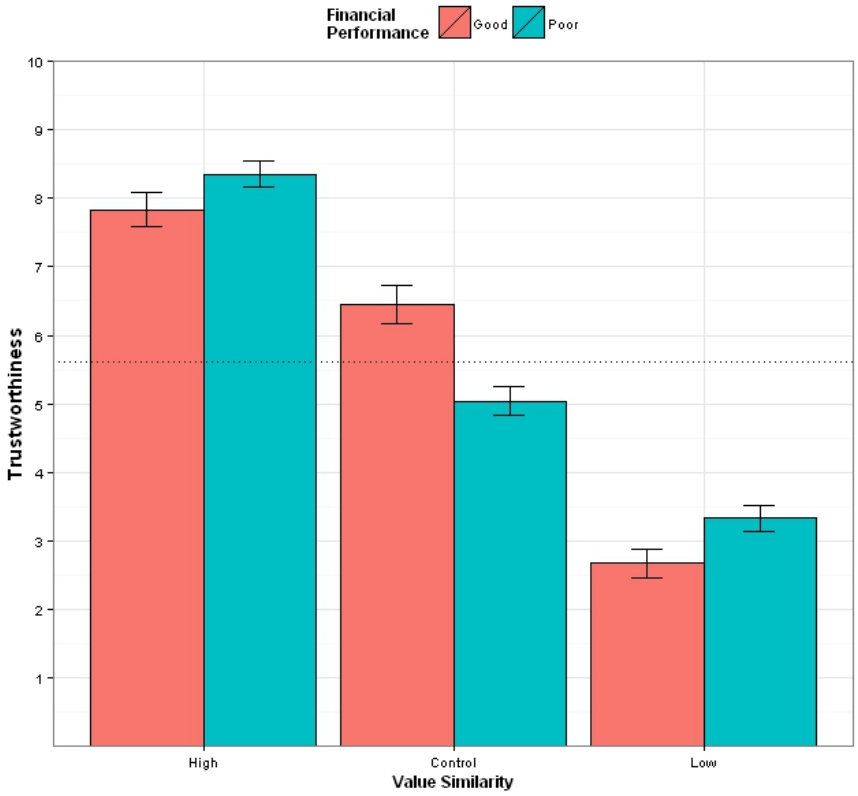


Figure 4.2: Trustworthiness of investment funds, as a function of past financial performance and similarity in values.

repeated-measure predictors. As anticipated, this analysis detected a large main effect of similarity in values, $F(2, 37) = 151$, $p < .001$, $\eta^2 = .80$. The analysis also detected an interaction between the two predictors, which appear to reflect the following result: Funds with 6-year profitability benefit more from high similarity in values, while funds with 9-year profitability are affected to a greater extent by low similarity in values, $F(2, 37) = 20$, $p < .001$, $\eta^2 = .35$. Before I commit to an interpretation of this interaction, I wish to attempt to replicate it in Experiment 2.

Experiment 2 was designed to consolidate the effect of value similarity on perceived trustworthiness and to introduce social labeling as comparison variable. In addition, Experiment 2 addresses a potential methodological concern. In Experiment 1, participants who gave high ratings to all moral values were mechanically presented with low-similarity funds that scored low on all moral values. This means that at least for some participants, similarity was confounded with overall social responsibility ratings, which could result in undue amplification of the similarity effect. Experiment 2 uses a manipulation of similarity that allays this methodological concern.

4.3.5 *Experiment 2*

4.3.5.1 *Method*

Young adults (26 women and 25 men, mean age = 27, SD = 8) were recruited through email and agreed to answer an online questionnaire. Participants did not receive remuneration.

The experiment followed a 3 (similarity) $\times$ 2 (ethical labeling) design. During Phase 1, participants expressed judgments about various values relevant to responsible business conduct. These judgments allowed to identify which among these values which were very important, moderately important, or not very important to each given participant. A computer program could then immediately generate fund descriptions whose values were more or less similar to that of the participant. In Phase 2, participants rated the trustworthiness of these funds.

As for Experiment 1 the materials used in Phase 1 were randomly selected and adapted from the OECD Guidelines for Responsible Business Conduct: *Respect of workers rights; Respect of environmental concerns; Conformity to national and international laws; Transparency of the selected companies; Struggle for competitiveness and against price arrangements; supply chain responsibility*. For each item, participants were asked "According to you, how important is the following statement for business ethics?" They responded on a 10-point scale anchored at *Not at all* and *Completely.* There were six target values in Phase 1, introduced in a random order among a set of filler items. To improve the accuracy of measurement, every question appeared twice

during Phase 1. The average of the two responses yielded the subjective importance of each target value, for a given participant.

From these ratings, each value was assigned a tier of importance for each participant. A given participants' Tier 1 personal values consisted of the two values that she rated as the most important. Tier 2 personal values consisted of the two values that came next in terms of importance, and Tier 3 consisted of the two values that the participant rated as the least important.

In Phase 2 of the experiment, participants rated the trustworthiness of various investment funds. The funds were either labeled as *conventional* or *ethical,* and their similarity with the participant's personal values was either *low, moderate,* or *high.* I use the designation *ethical fund* because of its historical importance (Schueth, 2003) and because it is still widely used (Sandberg et al., 2008). Here is one possible example of a fund description:

> The fund is an ethical fund and is run by a manager from London. She made the fund profitable for the last eight years and made it best in class. Recently the fund was evaluated by an ethical fund rating agency and received excellent grades with respect to workers' rights and supply chain responsibility.

The label of the fund was manipulated by using either the word "ethical" or "conventional" in the first sentence of the description. The similarity in value between the fund and the participant was manipulated by changing the two aspects that the fund received excellent grades for: These were either the participant's Tier 1 personal values (high similarity), or her Tier 2 personal values (moderate similarity), or her Tier 3 personal values (low similarity). Each fund description appeared twice during the experiment, with a manager of a different gender. The target funds appeared in random order among filler funds. After each fund description participants answered the question "To what degree do you trust this fund?" on a 10-point scale anchored at *Not at all* and *Completely.*

4.3.5.2 *Manipulation check*

In order to validate the manipulation of value similarity, I randomly selected the Phase 1 responses of five participants to the main experiment, together with the Phase 2 funds that were constructed for these participants in the low, moderate, and high similarity conditions. I then recruited 49 additional participants (24 women, mean age = 34) who considered the Phase 1 responses and the Phase 2 funds, and judged the similarity in values between Phase 1 responses and Phase 2 funds, on a 10-point scale anchored at *Not at all similar* and *Completely similar.* Again, the manipulation had the intended effect, $F(2, 48) = 15.22$, $p < .001$, $\eta^2 = .24$.

4.3.5.3 *Results*

Table 4.2 displays descriptive statistics for Phase 1 of the experiment. In addition to the average and standard deviations of the perceived importance of each responsible business value, Table 4.2 indicates the percentage of participants for whom this value was in Tier 1, Tier 2, and Tier 3. Even though individual rankings varied substantially (which is important for the manipulation), there was some degree of homogeneity in the Phase 1 judgments: Concerns for workers' rights and protection of the environment were often ranked as most important, whereas competitiveness and supply chain responsibility were often ranked as least important.

Value	Average importance	SD	Tier 1 (%)	Tier 2 (%)	Tier 3 (%)
Workers' rights	9.6	0.5	88	10	02
Environment	9.3	1.7	86	08	06
Conformity to laws	8.8	1.1	19	75	06
Transparency	8.2	1.5	02	86	12
Competitiveness	6.2	2.5	04	16	80
Supply chain	5.9	2.8	00	06	94

Table 4.2: Experiment 2: Participants' ratings of responsible business conduct values.

Figure 4.3 displays the trustworthiness ratings that participants gave in Phase 2 of the experiment, as a function of whether the fund was labeled ethical or conventional, and as a function of the similarity between the participant's personal values and the values of the fund. Figure 4.3 suggests that value similarity played an important role in judgments of trustworthiness, whereas the label of the fund did not. Funds whose moral strengths were values highly similar to that of the participant were rated as trustworthy, whereas funds whose values were not shared by the participants were rated as untrustworthy. Merely labeling a fund as "ethical", in contrast, did not appear to affect its trustworthiness.

These visual impressions are confirmed by a 3×2 analysis of variance, where trustworthiness was entered as the dependent variable, and where similarity in values (high, moderate, low) and fund label (ethical, conventional) were entered as repeated-measure predictors. As could be expected from Figure 4.3, this analysis detected a main effect of the similarity in values, $F(2, 50) = 71$, $p < .001$, $\eta^2 = .58$, and no other significant effect.[1]

1 I also conducted an analysis of variance that included the gender of the fund manager as an additional predictor, coded as being either the same gender as that of the participant, or the opposite gender. This analysis detected a main effect of similarity in values, but also an interaction between the similarity in values and whether the fund manager was the same or opposite gender as the participant, $F(2, 50) = 4.1$, $p < .02$, $\eta^2 = .08$. This interaction appeared to reflect a rather specific effect: When values were moderately similar (and only in that case), participants appeared to trust the opposite gender more. Because this effect is weak and not predicted, I will not speculate further about its interpretation.

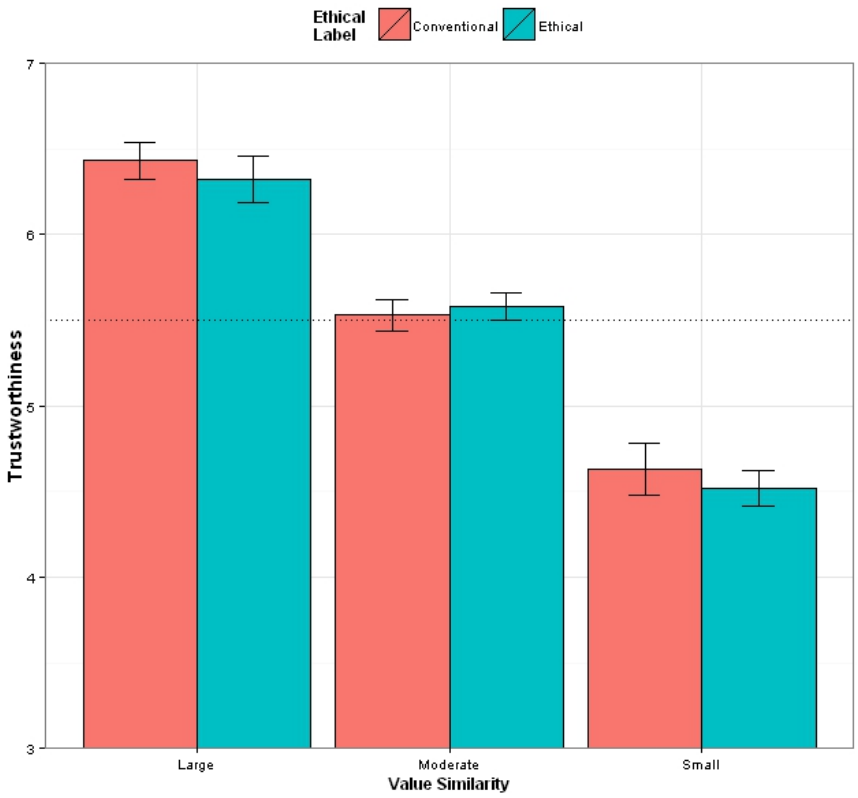


Figure 4.3: Experiment 2: Trustworthiness of conventional and ethical investment funds as a function of similarity in values.

It would thus appear that merely labeling a fund as "ethical" is not sufficient to increase its trustworthiness: Specific information is needed about which moral values the fund is known for. Furthermore, not all moral values increase trustworthiness by the same amount. Moral values shared by the person assessing trustworthiness have the greatest impact.

Experiment 3 was designed to consolidate the comparison of the effect of similarity in values to that of past financial performance, but also to address a potential methodological concern with the protocol I have used in Experiments 1 and 2. In Experiment 1 and 2 participants judged the importance of various moral values first, and then judged the trustworthiness of investment funds with profiles including information about moral values. While this method allowed to precisely tailor the fund descriptions to the values expressed by each individual participant, one concern is that it might prime participants to base their trustworthiness ratings on the moral information. As a consequence, this method might lead to an overestimation of the impact of similarity in values. Experiment 3 allays this concern by first asking for trustworthiness ratings, and only then measuring similarity in values.

4.3.6 *Experiment 3*

4.3.6.1 *Method*

A total of 115 participants (36 women and 79 men, mean age = 30, SD = 10) were recruited through the Amazon Mechanical Turk crowdsourcing marketplace. Participants received 10 ¢ for each completed questionnaire.

In the first phase of the experiment, participants rated the trustworthiness of various funds, which were described so as to manipulate their past financial performance, as well as their moral values. In the Phase 2 of the experiment, the similarity in values between funds and participants was measured by means of a standardized scale.

The fund descriptions used in the first phase were constructed according to a 2×3 within-participant design, manipulating the past financial performance of the fund (profitable for 6 of the last 10 years, or profitable for 9 of the past ten years), and the expected value similarity (low, moderate, high). The values of the funds in the low (resp., moderate, high) similarity condition were that which most commonly belonged to Tier 3 (resp., Tier 2, Tier 1) in Experiment 2. For example, the fund with poor past financial performance and low expected similarity in values was described in this way:

> According to EcoReport, the fund only selects companies that act in a competitive manner and have responsible supply chain politics. The fund was profitable for 6 out of the last the ten years.

Following each fund description participants answered the question "To what degree do you trust this fund?" on a 10-point scale anchored at *Not at all* and *Completely.*

In the second phase of the experiment, participants reviewed again each of the funds presented in the first phase, and completed for each of them a 6-item scale measuring similarity in values (Earle & Cvetkovich, 1999). This scale involved a series of judgments on 7-point scales about the fund, respectively anchored at *shares my values* and *has different values*; *in line with me* and *in the wrong direction*; *same goals as me* and *different goals*; *supports my views* and *opposes my views*; *acts as I would* and *acts against me*; *thinks like me* and *thinks unlike me.* A composite score of similarity in values could then be computed for each fund, for each participant. This composite score was the average of the reverse-coded responses to the 6 items (so that a high score would correspond to a high similarity in value).

4.3.6.2 *Results*

The manipulation of the similarity in values was a success, as shown by the ratings provided in the second phase of the experiment. Funds in the low similarity conditions scored an average of 4.4 (SD = 1.4), funds in the moderate similarity condition scored an average of 4.7 (SD = 1.4), and funds in the high similarity condition scored an average of 4.9 (SD = 1.5). Paired sample t-tests revealed that the difference between the low and moderate conditions was significant ($t(114) = 2.6, p = .01$), as well as the difference between the moderate and high condition ($t(114) = 2.1, p < .05$). As shown in Figure 4.4, trust increased with value similarity for all three sets of values.

4.3.6.3 *Mediation Analysis*

To test whether the effect of the experimental manipulation was indirect, i.e. mediated through value similarity, I tested the mediation model. I followed the procedure described by Preacher and Hayes (2004) which was implemented using their SPSS macro. This macro estimates the path coefficients in a mediation model and generates bootstrap confidence intervals for total and specific indirect effects of X on Y through the mediator. This analysis is appropriate for use with a multicategorical independent variable (experimental manipulation) and a mediator variable (value similarity ratings). I created a sequential code variables to reflect the levels of the categorical independent variable which were rank-ordered (1 = low similarity and poor performance, 2 = low similarity and good performance; 3 = moderate similarity and poor performance, 4 = moderate similarity and good performance, 5 = high similarity and poor performance, 6 = high similarity and good performance).

Figure 4.4: Experiment 3: Trust in a fund increases as a function of similarity in values, for all three sets of values used in the experiment.

I hypothesized that perceived value similarity is the mediator of the experimental manipulation - trustworthiness relation. Therefore, I used a nonparametric re-sampling method (bootstrap) with 5,000 re-samples to derive the 95% confidence interval for the indirect effect of the manipulation via the hypothesized mediator (perceived value similarity) to trust.

The relationship between the manipulation and trust in the funds was fully mediated by value similarity scores. First, the standardized regression coefficient between experimental manipulation and trust decreased substantially when controlling for value similarity. Second, the other conditions of mediation were also met: Experimental manipulation was a significant predictor of trust and of value similarity, and value similarity was a significant predictor of trust while controlling for experimental manipulation. The true indirect effect was estimated to lie between 0.01 and 0.036. Because zero is not in the 95% confidence interval, I can conclude that the indirect effect is significantly different from zero at $p < 0.05$, and thus perceived value similarity mediates the relation between the manipulation and trust.

4.3.7 *Discussion*

In Section 3.1 I have argued that, following CSR theories, increasing peoples trust is part of companies social responsibility (cf. Section 9.1). I have further argued that in the case of investment funds the ESG criteria, if used appropriately, could be an effective tool for levering trust. I then experimentally tested for the effect of SRIs practices on young adults' trust in mutual funds. The prediction was that participants' perception of the similarity between their own personal values and that of a fund would be key to increased trustworthiness. I manipulated similarity in values in three experiments, using three different protocols. In these experiments, I also compared the effect of value similarity to the effect of social labeling and past performance. In all experiments, funds whose values were similar to the personal values of the participants were trusted more.

Funds with a better performance record were sometimes judged more trustworthy. In Experiment 1, financial performance interacted with value similarity in a way that funds with poor performance were trusted significantly less when no moral information was available but reached the same trust levels when they promoted values similar to the personal values of participants. The good performers lost even more trust when they had dissimilar values. Experiment 3, however, did not confirm this interaction but revealed an overall effect of performance on trust ratings. Nevertheless, funds with

large value similarity and poor performance reached the same trust levels as funds with low similarity and good performance.

The results suggest that people prefer to trust mutual funds with moral values similar to their own personal values. This can be of value to financial institutions who seek to increase the social support (cf. organizational principle in Section 9.1.1). As compared to funds that were not rated, funds rated by a social responsibility rating agency were trusted significantly more when the ratings directly reflected a participants' personal business ethics values. However if the social responsibility ratings were dissimilar to a participants personal values, funds were perceived to be even less trustworthy than those who had not received any ratings.

Gärling, Kirchler, Lewis, and Raaij (2010) asked how change towards a more responsible investment fund landscape can be promoted, and suggested strategic organizational interventions. The studies show that value similarity should also play a central role if the goal of such interventions is to reach out to individual people. ESG criteria are consensual values for professionals, but often ambiguous and difficult to grasp for people. Governance, for example, is a concept that most economists would relate to processes that support consistent management and cohesive policies for the financial well-being of a company, rather than with moral values. People are unlikely to recognize this concern as a moral one.

The results suggest practical implications for fund promoters who are willing to follow the individual principle of CSP (cf. Section 9.1.1). First, trusting people are significantly more likely to invest, and if they do so, they invest a larger share of their wealth; conversely, less trusting people are less likely to invest, and if they so, they invest a smaller share of their wealth (Guiso, Sapienza, & Zingales, 2008). The studies identified similarity of values to be the key contributor to the formation of trust in SRI. Consequently, investment funds can acquire an edge by communicating on the specific personal values of targeted clients.

Additionally, the results suggest that funds can compensate a bad financial performance by communicating on value similarity. While good financial performance increased trustworthiness to some extent in the studies, value similarity was able to compensate poor past financial performance. This finding concurs with data on the extra-financial utility of SRI (Hoepner & David McMillan, 2009; Bollen, 2007). For example, semi-structured interviews of people invested in SRI identified their tendency to accept aggressive return trade offs in exchange for compliance wit moral values if a core capital stays untouched (MacKenzie & Lewis, 1999). A survey study across five countries also showed that the decision to invest in SRI mutual funds may be driven more by attitudes towards social issues than by financial returns (Williams, 2007). Increased trust may play a role in this extraction of non-financial utility from moral aspects of investments.

Lastly, the results suggest that merely describing a fund as ethical does not make a significant difference to its trustworthiness. This suggests that communicating on value similarity is a far better choice than simply using a social label. Because the focus was on young adults, the results are of particular interest for companies adopting a long term perspective. Fostering trust in a financial institution within the generation to come will take time but pay out in the long run (O'Neill, 2002). The study provides to the toolbox available to SRI professionals engaged in this process by providing a conceptual framework for the identification and implementation of individually relevant (personal) moral values within the SRI movement.

4.4 RETAIL BANKERS' RECOMMENDATIONS: A PRELIMINARY INVESTIGATION

4.4.1 *Introduction*

SRI has been successful in recent years. In France SRI assets rose from €21.8 billion in 2007 to €68.3 billion in 2010 (Blanc et al., 2010), and figures are similar across the old continent (de Marcillac, 2008). Sparkes and Cowton (2004) speak of a maturation of SRI becoming a classic investment management (mainstream) more accessible to the general public. Crifo and Mottis (2011) analysed the behaviour of French SRI analyst teams and conclude that there is an ongoing convergence between traditional management and SRI.

A closer look shows that the SRI movement is still dominated by institutional investors: They account for 70 % of SRI in France and 94 % in Europe (Blanc et al., 2010). However, individual investors ask for extra financial information (Hummels & Timmer, 2004), and consumer studies show a great attraction towards "green" products (Roberts, 1996; Griskevicius, Tybur, & Van den Bergh, 2010), and *fair trade* (Loureiro & Lotade, 2005).

Here, I study an important element in deciding to invest in SRI: The retail advisor recommendations. On the one hand, advisers can send signals to investors about the attractiveness of different products (Crawford & Sobel, 1982) or simplify the decision by explaining the main advantages and disadvantages of the funds (Pouget, 2007). On the other, people follow experts to make better decisions (Harvey & Fischer, 1997), have a good conscience, and psychological insurance (Sniezek & Buckley, 1995), but also to shrink their own responsibility (Harvey & Fischer, 1997).

In addition, two factors present in situations of investment choices favour the implementation of expert recommendations: The complexity of the situation and the lack of initial opinion. Indeed, people tend to choose default options in complex situations (Kahneman, 2003; Slovic, Zionts, Woods, Goodman, & Jinks, 2011). Accordingly, the inclusion of new non-financial criteria in the investing decision increases the complexity of the task and the

tendency to follow a recommendation. Also, lack of initial opinion favours the adoption of advice (Cain, Loewenstein, & Moore, 2005). It seems implausible that individual investors have a clear view of the investment choices before talking to his retailer.

In the following I investigate variables that influence recommendations of SRI funds by financial counsellors: (a) the characteristics of the fund; (b) the personal beliefs and values of the client counsellors; and (c) the personal values of his clients.

(a) The first potential variable is the characteristics of SRI funds. Rating seems the most important extra-financial characteristic advisers consider. Just like credit ratings, agencies offer ratings of extra-financial fund performance (Beer, Zenker, & Fernandes, 2006; Koellner, Weber, Fenchel, & Scholz, 2005). These ratings are commonly established on ESG values. Examples of criteria for environmental performance are the efforts to reduce pollution and conserve biodiversity investment fund. Examples of criteria for social performance are efforts wage gap or the rights of workers in companies held by the fund. Examples of criteria for governance performance are efforts in the fight against corruption, and economic transparency for companies in which the fund invests.

Nevertheless, one cannot consider extra-financial performance (ESG rating) without reference to financial performance. One needs to compare the effect of changes in extra-financial ratings to changes in the financial performance of the funds. In the experiments the MSCI Europe Index indicates financial performance.

Another feature of the fund which may influence recommendations are independent labels that certify the authenticity of the ethical approach (Hobeika, 2011). Consumer research has shown that labels increase choices of fair trade coffee (Loureiro & Lotade, 2005) and organic food (Sirieix, Delanchy, Remaud, Zepeda, & Gurviez, 2012). Nevertheless, the structuring role of labels in the context of the French SRI is yet to come Hobeika, Ponssard, and Poret (2013) and labels did not increase trustworthiness in our previous study. In France NOVETHIC (Novethic, 2013) dominates the market and serves as a label in the experiment study.

(b) The second variable that can influence the adviser are his personal beliefs and values. Schrader (2006) conducted a "mystery shoppers" study on recommendations of SRI funds in Germany. He finds that advisers take a passive role and have low knowledge of SRI funds. In conclusion, the study advises banks to include an evaluation of self-interest, and the willingness to take into account customers social and environmental needs, in their recruitment process.

The belief in the financial performance of SRI funds may also be important. Remember that advisers have a fiduciary duty towards their clients [2].

2 (Siegl, 2011) offers a legal framework of SRI funds and fiduciary duty.

Accordingly, if they believe extra-financial criteria impeded financial performance, fiduciary duty may compel them to retract from SRI. So far, evidence of relative SRI performance is sample specific, and difficult to generalize (Bauer et al., 2007).

Advisers personal ESG values can also influence recommendations. The concept that revolves around the similarity of values between two parties mobilised in Section 3.1 did influence trustworthiness [3]. Since values similarity also has positive effects on investment (Olsen, 2008), risk-taking, and trust (Siegrist et al., 2000), we predict that higher value similarity between advisers and investment fund, increases recommendations.

(c) The third variable influencing advisers recommendations are the values of customers. Professional counselling manuals, emphasize that it is essential to pay attention to the request (Spielberger, 2004). We predict that bank advisers are no exception, and fit recommendations to clients needs. That is to say they are more likely to recommend a green fund to a customer who expressed environmental values.

In addition, we assume that this individual tailoring can introduce a cognitive bias. It is likely that the recognition heuristic (Goldstein & Gigerenzer, 2002) can lead to a system based on an intuitive decision at the expense of a considered judgement council. The recognition heuristic is a cognitive process by which an individual makes inferences about patterns of missing knowledge. That is, people make decisions on the basis of the recognition of one single criterion. Advisers, recognizing the similarity between values of a client and values promoted by a fund may abort a deliberate process of reflection on the recommendation.

In summary, the experiments test variables influencing the recommendation of SRI funds by retail bank advisers. Potential predictor variables of recommendations are: the characteristics of funds (financial performance, label, ESG performance), the personal beliefs, and values of customers, and advisers.

37 retail advisers of two French banks (aged 36 years, 23 women and 14 men), participated in two online experiments. All participants except one had a higher education degree. We excluded 22 other participants from analysis because they stopped before the end of the study (82 % stopped after less than 2 minutes). Senior managers, and a chance to win €500, encouraged advisers to participate.

3 The name give to similar concepts differ in academic literature: salient values (Siegrist et al., 2000) similarity preferences (S. T. Fiske et al., 2002) and congruence of values (Enz, 1988)

4.4.2 *Experiment 4*

4.4.2.1 *Methods*

Participants indicated their propensity to recommend funds after reading short fund descriptions. Each description included information on the funds *financial performance* (five years vs. one year), *ethical label* (presence vs. absence), and *extra financial* ESG *ratings* from an independent agency. The agency gave individual ratings ranging from poor, 1 to very good, 10 about the environmental, social, and governance performance of each fund. Before the judgements, participants read illustrations of all ESG to assure proper understanding.

We also controlled for classical fund attributes. Participants read that all funds invest in stocks of the MSCI Europe Index that all funds have a risk equal to the index, and that there was no internal incentive to favour one fund. Regarding ESG ratings, participants read that the average score for MSCI companies was 5.

Table 4.3 shows a typical fund description. After each description participants answered to the question "Would you advise your clients to invest in this fund?". Participants responded on a 7 point Likert scale with a left hand to anchor of "1 Not at all" and right hand anchor of "7 Absolutely".

"Europe Actions"	
5 year performance	Inferior to MSCI
1 year performance	Identical to MSCI
Environment/Social/Governance rating	7/7/7
ESG Label	No

Table 4.3: Example of a fund description used in Experiment 1

Each adviser judged 20 funds in random order. We manipulated *financial performance*, *ESG ratings*, and *label*ESG. The financial performance was low (inferior to MSCI in 1 year and identical in 5 years), average (identical to MSCI in 1 year and 5 years), or high (identical to MSCI in 1 year and superior in 5 years). ESG ratings were average (Environment: 5; Social: 5; Governance: 5), positive (Environment: 7; Social: 7; Governance: 7), positive for environment (Environment: 9; Social: 4; governance: 4), positive for social (environment: 4; social: 9; governance: 4), or positive for governance (Environment: 4; social: 4; governance: 9). Label was dichotomous.

To alleviate the study we retained only a subset of the 30 funds resulting from an orthogonal combination of all three factors. Table 4.4 shows the 20 funds used in the experiment.

Fund nbr.	Financial performance	ESG rating	ESG Label
1	Low performance	555	No Label
2	Low performance	777	Label
3	Low performance	777	No Label
4	Low performance	944	Label
5	Low performance	944	No Label
6	Low performance	494	Label
7	Low performance	494	No Label
8	Low performance	449	Label
9	Low performance	449	No Label
10	Average performance	555	No Label
11	Average performance	777	Label
12	Average performance	777	No Label
13	Average performance	944	Label
14	Average performance	944	No Label
15	Average performance	494	Label
16	Average performance	494	No Label
17	Average performance	449	Label
18	Average performance	449	No Label
19	High performance	555	No Label
20	High performance	777	Label

Table 4.4: Subset of funds displayed to advisers.

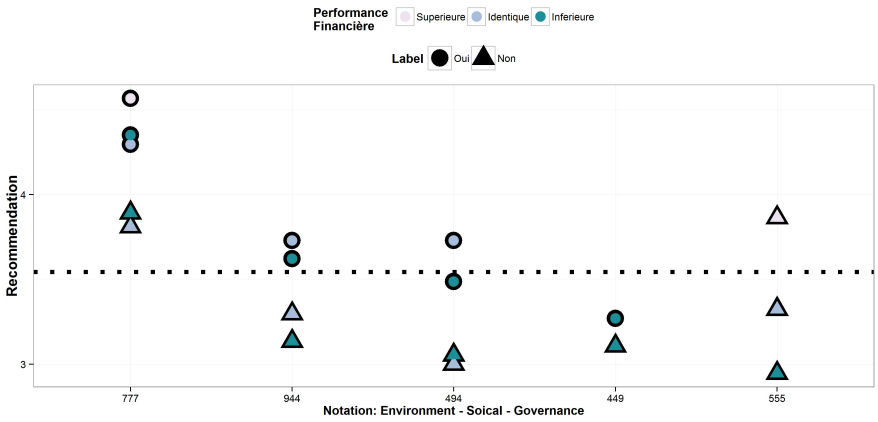


Figure 4.5: Propensity to recommend a fund as a function of *label*, *financial performance*, and *ESG rating*.

4.4.2.2 *Individual fund comparisons*

Visual inspection of Figure 4.5 shows that all three variables (Performance, ESG rating, and Label) influence advisers recommendations. Note that advisers prefer funds with all ESG ratings above average. All else being equal, better performance increases recommendations. Finally, the presence of a SRI label also increases the propensity to recommend a fund. Statistical comparison of recommendation means (see Table 4.5) confirm the visual impressions.

	n 01	n 02	n 03	n 04	n 05	n 06	n 07	n 08	n 09	n 10	n 11	n 12	n 13	n 14	n 15	n 16	n 17	n 18	n 19
n 02	0.00																		
n 03	0.02*	1.00																	
n 04	0.13	0.23	1.00																
n 05	1.00	0.00**	0.08	0.30															
n 06	1.00	0.33	1.00	1.00	1.00														
n 07	1.00	0.01*	0.42	0.92	1.00	1.00													
n 08	1.00	0.00**	1.00	1.00	1.00	1.00	1.00												
n 09	1.00	0.00**	0.08	0.81	1.00	1.00	1.00	1.00											
n 10	1.00	0.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00										
n 11	0.00**	1.00	1.00	0.66	0.00**	0.81	0.01*	0.01*	0.00**	0.00**									
n 12	0.41	1.00	1.00	1.00	0.66	1.00	0.21	0.88	0.05*	1.00	1.00								
n 13	0.06	0.23	1.00	1.00	0.02*	1.00	0.71	1.00	0.49	1.00	1.00	1.00							
n 14	1.00	0.00**	0.46	0.93	1.00	1.00	1.00	1.00	1.00	1.00	0.01*	1.00	0.41						
n 15	0.17	0.28	1.00	1.00	0.68	1.00	0.48	1.00	0.19	1.00	1.00	1.00	1.00	1.00					
n 16	1.00	0.00**	0.14	0.04*	1.00	1.00	1.00	1.00	1.00	1.00	0.00**	0.05*	0.10	1.00	0.04*				
n 17	1.00	0.01*	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00**	1.00	1.00	1.00	1.00	1.00			
n 18	1.00	0.03*	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.01*	0.66	1.00	1.00	1.00	1.00	1.00		
n 19	0.02*	1.00	1.00	1.00	0.23	1.00	0.16	0.46	0.02*	0.41	1.00	1.00	1.00	0.28	1.00	0.01*	0.33	0.27	
n 20	0.00**	1.00	1.00	0.22	0.00**	0.06	0.00**	0.00**	0.00**	0.00**	1.00	0.21	0.33	0.00**	0.17	0.00**	0.00**	0.00**	0.54

Table 4.5: Significance levels (p values) of t-tests between all pairs of the 20 investment funds: ** 1%, * 5%.

4.4.2.3 *Beliefs about the financial performance of SRI funds*

To test whether the belief in higher SRI performance (short and long term) influences recommendations we asked: "What do you think of the financial performance of SRI funds compared to conventional funds" for an investment horizon of 1 and 10 years?. Advisers responded on a 5-point scale with a left hand anchor of "Lower performance" and a right hand anchor of "Higher performance".

Overall, advisers believe that in one year SRI is less profitable as compared to conventional funds (M = 2.2, SD = 1.7). Nevertheless, in a ten year horizon they think performance is the same (M = 2.8 SD = 1.3 10 years). Further, the relative performance is higher then for one year $t(54) = 5.43$, $p < .001$.

To test if belief in a higher SRI long term performance increases recommendations of SRI funds we regressed recommendations on the interaction term between belief in 10 year performance and ESG ratings. For this analysis we coded three ESG rating dummy variables: high, mean and low ESG. The high ESG dummy was 21 for funds with ESG ratings of 777, or else 0. The mean ESG dummy variable was 17 for funds with ESG ratings of 944, 494, and 449, or else 0. The low ESG dummy was 15 for funds with ESG ratings of 555, or else 0.

To exclude non significant predictors we introduced the model 4.1 in a stepwise backwards regression. Table 4.6 shows the results. As predicted, a significant interaction between high ESG ratings and long-term performance indicates that funds with high ESG ratings were more recommended when an adviser believed in higher 10 year performance of SRI funds.

$$\begin{aligned} \mathrm{Recommendation} = & \beta_0 + \beta_1 * \mathrm{highESG} + \\ & \beta_2 * \mathrm{meanESG} + \\ & \beta_3 * \mathrm{lowESG} + \\ & \beta_4 * \mathrm{Performance10} + \\ & \beta_5 * \mathrm{highESG} * \mathrm{Performance10} + \\ & \beta_6 * \mathrm{meanESG} * \mathrm{Performance10} + \\ & \beta_7 * \mathrm{lowESG} * \mathrm{Performance10} + \\ & \beta_8 * \mathrm{Age} + \beta_9 * \mathrm{Gender} \end{aligned} \tag{4.1}$$

4.4.2.4 *Similarity of personal values*

To see if advisers who have strong concerns for specific values overly recommend thematic funds that promote these values we took two measures of personal ESG values.

]

	Coefficient	SD	t stat	Pr(>|t|)
(Constante)	3.0108	0.2579	11.67	0.0000
high ESG	0.0136	0.0140	0.97	0.3315
Belief in 10 year performance	0.5576	0.0502	11.11	0.0000
Age	-0.0264	0.0055	-4.78	0.0000
Gender	-0.4623	0.0973	-4.75	0.0000
HighESG:Belief in 10 year performance	0.0097	0.0047	2.07	0.0386

Table 4.6: Results of backwards stepwise regression (4.1).

The first measure of advisers personal ESG values was a pairwise comparison. Advisers imagined working for an insurance broker and should arbitrate between two identical financial credits offered by two banks. The only difference was that there were scandals about negative behaviours related to the environment, social issues, or governance issues in both banks. Arbitrage situations opposed scandals related to all ESG values. There were two negative behaviours for each ESG values.

The second measure is a ranking of ESG values. Participants were asked to rank environment (pollution reduction, biodiversity conversation), social (wage gap, labor rights) and governance (fight against corruption, economic transparency) issues in order of importance. The question also included filler items.

Average ESG values of both measures are displayed in Table 4.7.

	Environment	Social	Governance
Pairwise	3.7	5.1	3.1
Rang	5.9	6.2	5.4

Table 4.7: Retail advisers endorsements of ESG values measured by Ranking and Pairwise comparisons.

To test for a bias of personal values we regressed the advisers recommendations on the interaction term between personal ESG values and ESG ratings of the funds (Model 4.2). The results (see Table 4.8) confirm that

advisers recommend funds that promote their personal ESG values more ($R^2 = .06, F = 12.88$) [4].

$$\begin{aligned} Recommendation = & \beta_0 + \beta_1 * Environment + \\ & \beta_2 * Social + \\ & \beta_3 * Governance + \\ & \beta_4 * Age \end{aligned} \tag{4.2}$$

	Coefficient	SD	t stat	Pr(>|t|)
(Constante)	-0.5913	0.3666	-1.61	0.1071
E advisor * E funds	0.0289	0.0048	6.07	0.0000
S advisor * S funds	0.0124	0.0044	2.82	0.0050
G advisor * G funds	0.0217	0.0047	4.59	0.0000
Age	-0.0232	0.0061	-3.79	0.0002

Table 4.8: Significant interaction terms for model 4.2. Similarity in values between personal values and values promoted by investment funds increases recommendations.

In summary, funds with a holistic approach on ESG integration are the most recommended. Further, the influence of ESG ratings is greater if they accompanied by an independent label. Beliefs in long-term SRI performance, and the similarity in values between fund and advisers, both increase recommendations but to a lesser extent. Another hypothesis is that advisers are more alert to the values of their clients in counselling situations. Experience 2 tests this hypothesis.

4.4.3 *Experiment 5*

4.4.3.1 *Methods*

In Experiment 5, advisers faced a familiar situation: They were to give advice to investors who inherited a small sum of money (€10,000). All advisers read about fictitious investors in random order. We used customer records format to describe investors and kept usual information (Amount of savings, savings capacity, risk profile, investment horizon) constant. In addition to this information customers had concerns about *environmental*, or *social*, or *governance* issues, or had a *long term* investment horizon. In a *control* condition this information was missing.

4 A backwards stepwise regression of recommendations on all variables used in Experiment 1 confirms the effect of belief in a good long-term performance of SRI funds ($\beta = 0.010993$, $p < .01$) and reveals an interaction between the E values of the fund and E values of advisers ($\beta = 0.009650$, $p < .01$)

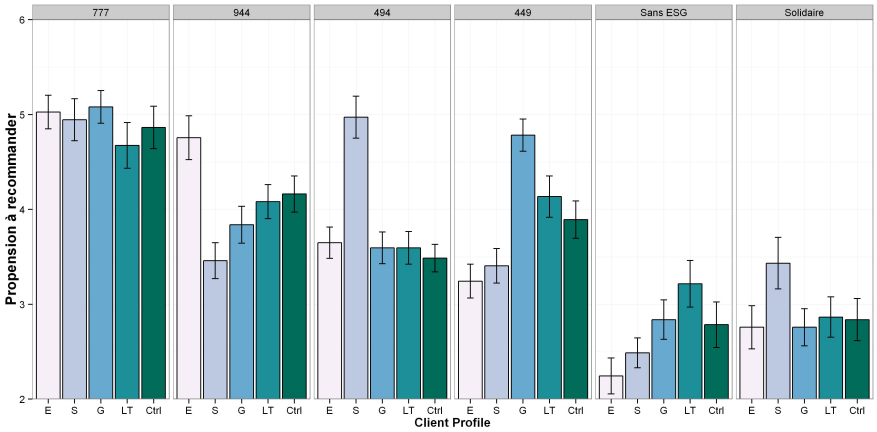


Figure 4.6: Propensity to recommend SRI funds to clients with specific ESG concerns. Advisers recommend the funds with an ESG rating of 777 to all clients. Propensity to recommend the fund without ESG rating and the "Solidarité" fund is low. Advisers target recommendations of funds that promote one dimension of ESG while neglecting the others (944, 494, 449) towards clients with the value in question.

Advisers indicated their willingness to recommend each of six funds for all five clients. Before, advisers read that prior screening had filtered those funds with equal performance, risk and a similar investment universe. They differed only in their non-financial investment strategy. The fund *ESG* strategy was either environment themed (ESG ratings 9/4/4), social themed (ESG ratings 4/9/4), governance themed (4/4 / 9), using a holistic (ESG 7/7/7), or conventional (-/-/-) approach. At the demand of our partners we also included a "SolidaritÃ©" fund in the design. This is a particularity of the French market that builds on the concept of solidarity between people.

After each description participants answered to the question "Would you advise this client to invest in this fund?". Participants responded on a 7 point Likert scale with a left hand to anchor of "1 Not at all" and right hand anchor of "7 Absolutely".

4.4.3.2 *Results*

Figure 4.6 displays the results of Experiment 5. They confirm that advisers prefer a holistic ESG approach: Propensity to recommend a fund that has a rating of seven in all ESG values is always greater than average. In addition, recommendations of this fund are equally high across investors, even for long-term, and control clients.

Recommendations of the three themed funds show that advisers match customer vales and fund theme. For example, they recommend a fund with the notation E: 9, S: 4, G: 4 to a customer who expressed a preference for the environment. Propensity to recommend funds that match clients values is as high as recommendations of the holistic funds.

Funds without ESG rating (Panel "Without ESG" in Figure 4.6) and the " Solidarity" fund (Panel " Solidarity" in Figure 4.6) are the least recommended. However, advisers recommend the " Solidarity" fund to investors worried about social issues. This is probably due to the similarity of the " solidarity" concept with themes of social issues. Recommendations of funds with no ESG rating to each customer type are the same as recommendations made to the control client.

A repeated measures analysis of variance *Client Type (5)* $*$ *Funds type (6)* confirms the visual impressions. There was a significant interaction between the two factors, $F(20.1050) = 2.41$, $p < .01$. For clarity we omit the table Post-hoc comparisons (Tukey HSD) due to the large number of comparisons [5].

4.4.4 *Discussion*

The objective of this study was to inquire variables affecting the recommendations of SRI funds by retail advisers. In two experiments, we tested factors related to the characteristics of investment funds, personal beliefs about SRI, personal values of advisers, and personal vales of customers.

Experiment 1 tested two hypotheses. The first was that characteristics of SRI funds influence investment advice. Precisely, it confirmed that better financial performance, better extra-financial performance, and presence of a label favour recommendations. As we can see in Figure 4.5, all else being equal recommendations of funds with superior performance are higher. However, a holistic ESG approach is always recommended, even when performance is poor. If an independent label lends a stamp of credence to a holistic fund recommendations for funds with a financial performance identical to the benchmark are even beyond recommendations of funds with superior performance with no label [6].

The second prediction was that advisers personal beliefs and values influence investment advice. We tested this hypothesis in two steps. First, we predict the recommendations of SRI funds with beliefs about long-term financial performance of SRI funds, then with the similarity between values put forward by the funds and advisers personal values.

While advisers believe that SRI funds underperform conventional investments in the short run they also believe that performance over a period of ten years is the same. Results also show that the more advisers believe in a long-term performance more they will tend to recommend funds that have received good ESG ratings: Interaction between ESG values and ten year financial performance.

5 The results are available upon request by writing to marcoheimann@gmail.com

6 We did not find an effect of labels on perceived trustworthiness of investment funds in Experiment 2 of Section 3.1. Two possible reasons are the different dependent variable, trust vs. recommendation, and the different populations.

Results further show that advisers personal values influence advice. The more an advisor adheres to a particular ESG value the greater the temptation to recommend a funds with a high rating of this value. This influence is the largest value for environmental values. It is important to emphasize that this is the magnitude of the interaction effect and not the importance of each value in our sample. Further, all variables explain only a small part of the variance, and future research should consolidate the findings.

An alternative hypothesis is that the effect of personality factors is more global. A recurring feature of personality in pro-social behaviour is altruism (Bereczkei, Birkas, & Kerekes, 2007; Griskevicius et al., 2010). Its definition is the acceptance of a financial cost in the pursuit of a moral action. In an exploratory posture, we proposed advisers to donate some of their potential gains (€500) to a non-governmental organization (NGO). Participants were free of the amount to (€0 to €500) and the distribution amongst six NGOs.

Participants who had given more to NGOs were more inclined to recommend SRI funds in our study. For the moment this is an exploratory results on the role of altruism in the SRI, but has the merits extension in further research.

Experiment 5 tested the hypothesis that advisers seek to overly match customer values with ESG ratings of funds. One could speculate that the recognition of a similarity between the values expressed by a client and those of SRI thematic funds triggers an intuitive advice at the expense of a deliberate advice.

The results on themed funds favour of the speculation about the existence of a recognition heuristic resulting in an intuitive advice. This is dangerous because it is likely that investors who expressed concerns about one value may also think that the others are important. Those customers may even be more concerned with the other values then the average investor. A person expressing concerns about the environment may also be highly concerned about social issues [7]. Recommending her a fund with the highest performance in environment may be a good intuition. However considering the bad performance in social, and governance recommending this fund to the same extent as a fund with globally good ESG ratings is inadequate.

It goes without saying that professional can increase performance (financial and ESG), to lever advisers recommendations. But certification by a label also increases recommendations. This latter finding has implications for internal communication policy of banks.

It is possible to embed findings about beliefs and values in the promotion of SRI by two non-exclusive strategies. Institutions willing to increase the share of SRI funds in their clients accounts should shift their focus towards advisers beliefs about SRI. Emphasizing the long-term performance argument seems to be a promising tool to increase advisers propensity to rec-

7 Correlation between the judgements of ESG values in our sample confirm this intuition.

ommend SRI funds. Institutions can also make use of the influence advisers personal values have on SRI fund recommendations. Nevertheless, since personality traits are more difficult to change over time, assessment of personal values are most effective if integrated into the advisor recruitment process.

The following Chapter now turns towards the problem of remunerations. I would like to remind the reader that the perspective of this question is rather an organizational one. Whereas Chapter 4 aimed at revealing cognitive processes of trusting behaviour with the aim to foster trust in mutual funds, Chapter 5 aims at mapping cognitive drivers of acceptblity judgements with the ultimate goal of making remunerations more widely acceptable.

Both, Chapter 4 and Chapter 5 can be embraced by management, the former with a marketing focus, the latter with a focus on human resources. However In the case of remunerations, government policy measures seem to be more closely related. Indeed in the actual situation it seems unthinkable that governments would rule about the inclusion of extra financial criteria in investments [8]. It is a different case for remunerations where salary caps are already on many agendas.

4.5 INVESTOR'S MOTIVATIONS TO HOLD SRI MUTUAL FUNDS

To elicit contributions, charities use incentives like wrist bands, thank-you gifts, concerts, or advertised donors lists. In some cases government also provides tax advantages for donors. Similar incentives exist for 'green' products, like hybrid cars, or solar panels. Given the relative absence of incentives for SRI, the growing number of socially responsible investors is impressive (de Marcillac, 2008). Here I propose to study the motives of socially responsible investors. Unlike previous studies who rely on survey, and/or holdings data (Riedl & Smeets, 2011; Nilsson, 2008; Jansson & Biel, 2009), I use an investment game with a financial incentive and real world funds.

Measuring pro-social behaviour in SRI is different from donations, and consumption goods. Although there can be many reasons for someone to invest (eg. retirement, children's education, wealth creation), socially responsible investors have in common a desire to improve the society. Unlike the donor, the socially responsible investor joins his pro social objective to an existing activity: investing. The difference between SRI and consumer goods is that, as for any investment, SRI's objective is to generate returns. As opposed to, say, someone who buys a coffee for the pleasure of drinking it, someone who buys an SRI fund expects a financial return.

Also pro-social activity (eg. volunteering) can decrease when it is financially rewarded (Bénabou & Tirole, 2010). This is mainly due to people's concerns

8 Indeed the concept of fiduciary duty legally binds fund managers to invest exclusively with the goal of financial return. Thought as protection against fraud some young scholars have recently started to envision a new legal paradigm for SRI (Siegl, 2011)

about their social image. The reason is that if someone is financially rewarded for pro-social behaviour, this seeds suspicions about his true motives with others (Ariely et al., 2009). Since investments are a private affair, this crowding out of the effect of financial incentives through image concerns is unlikely to appear in SRI.

4.5.1 *Literature Review*

It is a recurrent notion that multiple factors influence the decisions of socially responsible investors (Beal, Goyen, & Philips, 2005; Hummels & Timmer, 2004). The underlying theory of this research is that "financial", "psychological", "pro-social value", and "socio-demographic" factors influence investments in SRI (cf. Figure 4.7).

While scholars have shown that investors also seek information about the CSR of their investments (Hummels & Timmer, 2004; Hockerts & Moir, 2004), financial aspects strongly influence retail investor's choices of SRI (Jansson & Biel, 2009).

To this date, it is uncertain whether there is a difference between conventional and SRI performance (Ambec & Lanoie, 2008; Bauer et al., 2007). But marketers of SRI stress the argument that their investments reduce intangible risks, for example of new regulations that require costly CO_2 filters, or bad press through a child labour scandal. Nevertheless this advantage, they say, only plays out in the long run, since regulations may take time to come, and scandals to unfold. Retail investors may see long term outperformance as a reason for investments.

H_1a*: Ceteris paribus, the better* SRI *funds are believed to perform in the long run (as compared to conventional funds), the more money is allocated.*

H_1b*: Ceteris paribus, the less* SRI *funds are believed to be risky (as compared to conventional funds), the more money is allocated.*

Another aspect of the financial world that is likely to influence investments is a label. Strictly speaking an SRI label evaluates extra-financial criteria, however it institutionalizes the quality of an investment's ESG research and has significant market structuring power (Hobeika et al., 2013). Further labels increase giving to charity (Kraut, 1973), positive perceptions of fair trade coffee (Loureiro & Lotade, 2005) and sustainable food (Sirieix et al., 2012).

H_1c*: Ceteris paribus,* SRI *funds that are certified by an ethical label, are allocated more money.*

For some investors certification of ESG research through an independent label may also be a cue for the effectiveness of the long term outperformance because it guarantees that the intangible risks are properly assessed. Consequently the effect of a label might be stronger for investors who believe in the long term outperformance argument.

H_1d*: Ceteris paribus, SRI funds that are certified by an ethical label, are allocated more money by investors who believe that SRI have a better long term performance.*

Factors related to the investors psychology may also influence his decision to invest. It is worth to notice that in order to study the psychological factors the SRI it is paramount that investment decision, the assessment of the psychological trait are made at the same time. The reason is that traits can change over time and my not be stable. For example, a pattern of routine risk taking will not persist when it is proven unsuccessful. Knowledge of outcomes, positive and negative reinforcements, will affect adaptations to changing circumstances (Osborn & Jackson, 1988). An investor who bought an SRI fund two years ago may have a different level of risk propensity today, yet still appear in holdings data.

A growing body of literature has investigated people's motives for pro-social behaviour such as donating to charities and green products (Ariely et al., 2009). These motives can roughly be devised in three broad categories. *Intrinsic motivation*, is the personal value of giving, ie. ones preference for the well being of others, or pure altruism (Griskevicius et al., 2010; Henrich et al., 2005; Delton, Krasnow, Cosmides, & Tooby, 2011). *Extrinsic motivation*, is any material reward or benefit associated with the behaviour (ie. in SRI the financial factors). *Image motivation*, or signalling motivation, refers to an individual's tendency to take into consideration how his actions will be perceived by others. Image motivation thus captures the utility someone may derive from being liked/respected by others, or himself. An individual who is looking for social approval of his actions would thus conform his actions with the social norm of acting pro-socially.

H_2a*: Ceteris paribus, intrinsically altruist investors allocate more money to SRI funds.*

H_2b*: Ceteris paribus, investors who are concerned with their social image allocate more money SRI when their allocations are made public.*

I identified four cognitive factors that may influence SRI investments. The capacity to delay rewards in inter-temporal choice is known to be a determinant of economic decisions (Wittmann & Paulus, 2009), with well known neural rootings, and a developmental component (Eigsti et al., 2006). Economic choices that involve an opportunity for near-term reward, are associated with cortical structures that have consistently been implicated in impulsive behaviour (eg. addictions) (McClure, Laibson, Loewenstein, & Cohen, 2004). In parallel, the capacity to inhibit temporal discounting may lead investors to increase their (long term) SRI allocations.

H_2c*: Ceteris paribus, investors who inhibit temporal discounting allocate more money to SRI funds.*

Risk propensity is the tendency to take or avoid risk in a specific domain (ie. investment). A theoretical distinction is made between risk and risk events.

The first is the probability of a decision outcome in the context of expected-utility theories (von Neumann, J., Morgenstern, 1947), whereas risk events mean low probability outcomes (Slovic, 1987). Risk events can imply uncertainty (ie. an explicit quantification of the probability has not been made). In a risk event such as a lottery, the probabilities may be known (although few buyers of lottery tickets are likely to want to know them), whereas in a risk event such as an investment, there is uncertainty because the probabilities are unknown (but investors would like to know them). Further- more, economic risk taking mostly pertains to perceived financial risks.

Practically risk-avoiders are more likely to overestimate the likelihood of losses relative to gains, and consequently require a higher probability of gains to tolerate exposure (Schneider & Lopes, 1986). Consequently, risk-avoiders may choose SRI in because they search protection against intangible risks, whereas risk-seekers could overweight conventional funds.

H_2d*: Ceteris paribus, the smaller an investor's risk propensity the more money she allocates to* SRI*.*

Studying the segmentation of 'green' consumers, (Straughan & Roberts, 1999) find that the most important segmentation variable is perceived consumer effectiveness (PCE). PCE relates to the notion that a consumer is more likely to act pro-socially if she believes that consumer choices will make an impact on the issue in question. Precisely, PCE in SRI means that investors are more likely to invest a greater proportion in SRI funds if they think that their individual investment can help improve the ESG dimension(s) targeted by the fund. PCE has already been found to influence SRI in holdings data analysis (Nilsson, 2008), and clustering approaches (Nilsson, 2009).

H_2e*: Ceteris paribus, the greater an investor's perceived consumer effectiveness, the more money she allocates to* SRI*.*

Another belief about SRI is about the complexity of financial and moral aspects considered together. When there are two goals, pursuit of financial return and prosocial impact, investors might be overwhelmed by the abundance of information. This conflict with peoples tendency to limit their efforts to be informed (L. Berg, 2007), and may trigger resignation. Labels were first introduced by marketers to simplify consumer choices, by subcontracting the evaluation to independent labelling organisms. Likewise, investors who believ that there is an abundance of information in SRI, may increase their investments when a fund is labelled.

H_2f*: Ceteris paribus, if an investor thinks that there is an abundance of information to consider in* SRI*, a label will increase the money allocated to* SRI*.*

In general, consumer expertise can have significant effects on consumer decision making (Alba & Hutchinson, 1987). Researchers have been concerned with consumers economical rationality and at the same time with their lack of awareness of joint responsibility for environment and the society (L. Berg,

2007). In investing, familiarity with financial products results in increased investor expertise, but does not guarantee expertise in SRI.

Since different tasks require different types of expertise, task performance on a particular task requires specific knowledge. Here we propose to evaluate the investment expertise and SRI expertise as task specific. Whereas investment expertise is primarily concerned with broad knowledge about financial products, and market mechanisms, SRI expertise is concerned with knowledge about SRI practices, and ESG (implementation).

H_2g*: Ceteris paribus, an investor's investment expertise influences the money allocated to* SRI*.*

H_2h*: Ceteris paribus, an investor's* SRI *expertise influences the money allocated to* SRI*.*

One characteristics of novice, as compared to expert reasoning, is that they tend to simplify complex problems and ignore hidden complexities (Alba & Hutchinson, 1987). Likewise they are less likely to engage in research, and are more likely to be influenced by top-of the mind attributes or cues available immediately at purchase. One immediate cue in SRI is an ethical label from which novice investors can readily infer SRI and investment quality.

H_2i*: Ceteris paribus, an investor's investment expertise influence on the money allocated to* SRI *is moderated by an ethical label.*

H_2j*: Ceteris paribus, an investor's* SRI *expertise influence on the money allocated to* SRI *is moderated by an ethical label.*

The factors related to investors pro-social values, are very much linked to value similarity (cf. Section 3.1). As we have seen similarity in values increases perceived trustworthiness, which in turn is a prerequisite for risky decisions. Simply put, people are more likely to take risk with someone who has values similar to their own values. In the case of private investors, it is therefore reasonable to speculate that those who place a higher value on pro-social aspects are more disposed to invest (take a risk) in SRI.

In SRI the values of the funds are commonly divided into the ESG categories (cf. Section 3.1). The environment aspect comprises climate change, hazardous waste pollutions, nuclear energy, and sustainability. These dimensions have in common that they are concerned with the preservation of life and biodiversity on earth. The most representative dimension fo the social aspects is human rights, but it is also concerned with consumer protection, working conditions and gender equality. The typical dimensions of corporate governance are executive compensations (cf. Chapter 5), transparency in corporate decision making (cf. Chapter 6), and management structure.

Marketing researchers have argued that scepticism towards green claims from products can lead to a "green backslash" (Crane, 2000). Nilsson (2008) have suggested that this can also be the case for SRI and showed that trust in green claims increases SRI behaviour. Since trust increases with value

similarity the consensus on ESG values comes with a risk. It is possible that investors place different values on each of the ESG issues, and that some are not similar to their own values. In other words, SRI funds may appeal to investors for whom the environment is very important, but for those who care about corporate governance, or social issues, SRI may not be the optimal tool. Therefore each ESG dimension should be evaluated separately.

H_3a*: Ceteris paribus, an investor's valuation of environmental issues influences the amount allocated to* SRI*.*

H_3b*: Ceteris paribus, an investor's valuation of social issues influences the amount allocated to* SRI*.*

H_3c*: Ceteris paribus, an investor's valuation of corporate governance issues influences the amount allocated to* SRI*.*

Finally, a number of socio-demographic variables are included to test whether, and how demographic factors relate to the extent of SRI investments. Socio-demographic variables have been widely used within the literature on financial services. Capon, Fitzsimons, and Prince (1996) find that clusters based on variables such as age, and gender are significantly different in consumption of financial services. Also, younger households tend to hold investment portfolios associated with a higher level of risk (Pålsson, 1996).

Those differences, however, concern general investment behaviour. Socio-demographic variables in SRI studies are less frequent. Only few have actually looked at the influence on responsible investments (Mclachlan & Gardner, 2004; Williams, 2007; Nilsson, 2009). To derive viable hypothesis I turn towards results form general pro-social behaviour.

Socially responsible Consumer have been shown to be younger (e.g. Diamantopoulos, Schlegelmilch, Sinkovics, & Bohlen, 2003), female (e.g. Laroche, Bergeron, & Barbaro-Forleo, 2001; Lee, 2009) and better educated (Chan, 1999).

H_4a*: Ceteris paribus, younger investors invest a greater proportion of their portfolio in* SRI *profiled funds.*

H_4b*: Ceteris paribus, women invest a greater proportion of their portfolio in* SRI *profiled funds.*

H_4c*: Ceteris paribus, better educated investors invest a greater proportion of their portfolio in* SRI *profiled funds.*

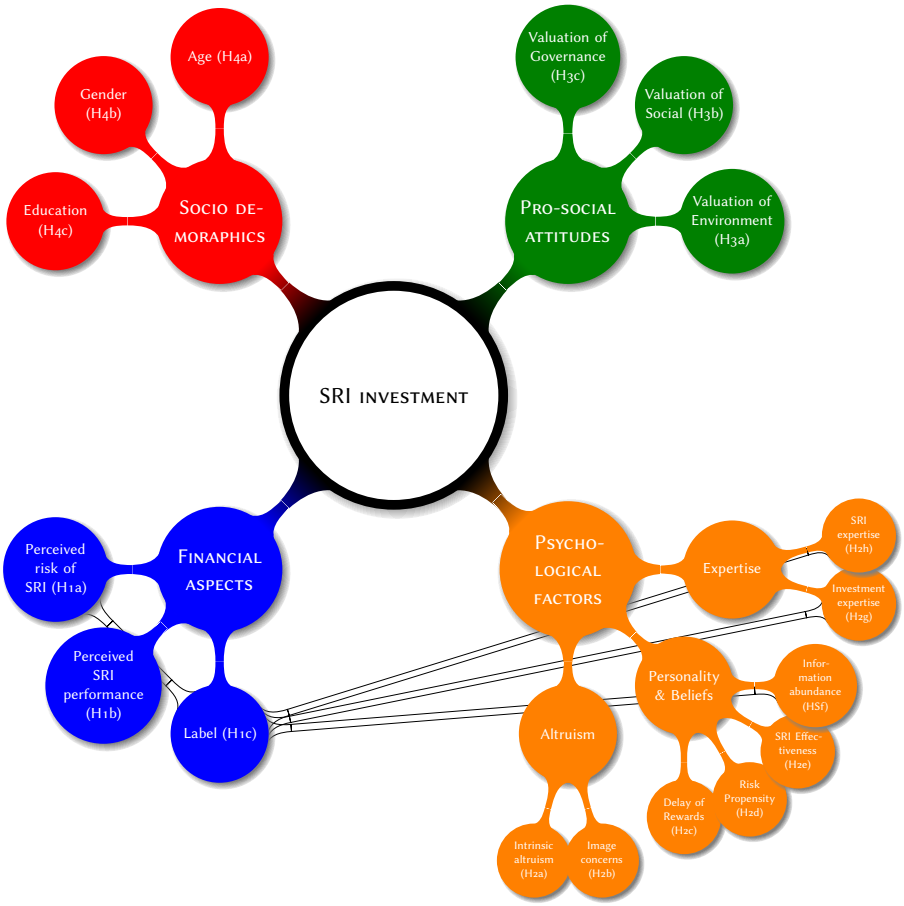


Figure 4.7: A model of predicted influential variables on private investors decision to invest in SRI profiled mutual funds

4.5.2 *Experiment 6*

4.5.2.1 *Sample and data collection*

This study investigates the impact of several perception related, and demographic variables on private investors decision to invest in socially responsible mutual funds. This said, the population of interest are investors that hold mutual funds and potentially allocate some of their wealth to an SRI fund. Additionally, it is interesting to explore differences between investors who already hold socially responsible funds and those who don't. Consequently we generated our sample from an existing customer base from a European mutual fund provider that offers both, SRI and conventional investments. The advantage is that those customers can easily choose between two types of funds that have a similar investment universe and technique, except that one adds ESG analysis to the investment decision process.

The data was collected in France. The mutual fund providers local branch invited 1305 investors holding at least one SRI investment, and 4367 conventional investors to participate in an online investment game with a chance to win €5.000 followed by some questions. After sorting out unusable questionnaires, including those with missing cases a total of 196 remained, representing a response rate of 4.5%. One reason for this comparably low rate [9] could be that the questions on personality, and values may seem incongruous in the investment context.

4.5.2.2 *Sample characteristics*

The sample consisted of more women (52%) then man, ad the average age was 51 years (SD: 13.6). Although a high average age was expected, the large dispersion around the mean was somewhat surprising. The sample was well educated as 71% of participant held a higher education degree. The median net wealth of participants is between €250.000 and €300.000.

4.5.2.3 *The investment game*

After a few introductory sentences and disclosure about anonymity, investors read about the investment game. In order to have a chance to win €5.000 invested in the mutual fund they choose during the game, investors needed to answer all questions. One main concern was that investors could receive the funds they choose in the experimental game credited to their account. Therefore, investors had to indicate the percentage of the €5.000 they wanted to allocate to each fund next to summary descriptions of existing funds they also could have purchased at their own initiative. There were links to the summary prospectus at the mutual fund providers homepage.

9 Comparable studies report response rates of ≈ 20% (Nilsson, 2008)

Table 4.9 is an example of the allocation investors had to make during the game. The instruction read *"Please write in the case next to each fund the % you would like to invest"*.

Europe Capital Durable	Learnmore	
Euro Capital Durable is suitable for investors who wish to invest in European businesses who have a sustainable development approach.		.....%
Europe Stock	Learnmore	
Europe Stock is a fund intended for investors seeking access to European equities.		.....%
France Stock	Learnmore	
France Stock is a fund intended for investors seeking diversified investments in the euro zone mainly French		.....%
Fund European Equity High Dividend	Learnmore	
Fund European Equity High Divident ID D support for investors seeking access to European equities with strong dividends.		.....%
Europe Actions Immobilier	Learnmore	
Immobilier European equities ND is a fund intended for investors seeking access to French or European listed real estate companies.		.....%
	Total	100,00%

Table 4.9: Example of the allocation investors had to make during the investment game.

The game was registered with a bailiff to comply with legal requirements. Investors only participated if they agreed with eligibility requirements, disclaimer (cf. Appendices 10). The bailiff was also responsible for randomly drawing one investor who would receive the funds credited on his account. To provide control for fund differences other than the addition of ESG evaluations to the investment decision, funds were selected that had equal performance objectives and risk profiles, also the investment universe of all funds were stocks listed in European exchanges.

4.5.2.4 *Measurements*

The independent variables included in the questionnaire were those related to pro-social valuations, psychological, financial, and socio-demographic aspects. The effects of ethical labelling, image concerns, and pro-social values were experimentally manipulated in between subjects. All other measures were standard measurement scales.

Since we predicted that ethical labelling would have and influence on SRI behaviour, half of the investors was randomly assigned to an experimental condition in which the description of the SRI fund in the game was followed by the indication that the fund was labelled by an independent agency. The other half did not receive this cue.

In order to test our prediction about image motivation for pro-social behaviour in socially responsible investment, half of the investors was randomly assigned to an experimental condition in which the portfolio of the winner of the game was made public online and a local newspaper. In order to make anonymous participation possible, investors could opt-out from publication, but were no longer able to participate in the lottery.

Finally, half of the participants were told that they could make a donation to one of four NGOs before they played the game. For equality the other half could make the same donations, but after having played the game. Participants were told that the amount of the donation would be taken from the €5.000, but that the proportions they would choose/had chose were not affected. In order to inquire whether an investors individual valuation of each of the ESG dimensions affects his SRI behaviour, the NGOs were themed environment (WWF), social (Care), corporate governance (Transparency Intl.), or neutral (Wikipedia). Table 4.10 provides a summary of all variables and the corresponding measurements.

H:	Variable	Measurement constructs
1a	Perceived riskiness of SRI	*Compared to conventional funds SRI funds are less risky.*
1b	Perceived SRI financial performance	*SRI funds have a higher long term performance.*
1c	Label	*Experimental manipulation*
2a	Intrinsic altruism	*Overall level of donations*
		Altruism scale from Goldberg et al. (2006)
2b	Image concern	*Experimental manipulation*
		Self monitoring scale from Goldberg et al. (2006)
2c	Delay of rewards	*Measure from Laibson et al. (2002)*
2d	Risk taking	*Risk propensity scale from Saini and Martin (2009)*
2e	SRI effectiveness	*Consumer effectiveness, adapted from Nilsson (2008)*
		SRI can help to improve environmental aspects of society.
		SRI can help to improve social aspects of society.
		SRI can help to improve corporate behaviour.
2f	Information abundance	*There is an abundance of information to consider in SRI.*
2g	Investment expertise	*Self report: How good is knowledge about financial products?*
		Self report: How good is your expertise with financial products?
		Trivia quiz with 3 questions (eg. If interests go up, do bonds go? Up, Down, No change, Don't know.)
2h	SRI expertise	*Self report: How good is your knowledge about socially responsible investments?*
3a	Valuation of environment	*Donation to WWF*
		Businesses should care about 'economic' (1) vs. 'environmental' (7) issues.
3b	Valuation of social	*Donation to Care*
		Businesses should care about 'economic' (1) vs. 'social' (7) issues.
3c	Valuation of corporate governance	*Donation to Transparency Intl.*
4a	Age	*Self report*
4b	Gender	*Self report*
4c	Educaiton	*Self report*
-	Exploratory	*Clicks on summary prospectus*
-	Exploratory	*Time to select funds*

Table 4.10: Hypothesis and relevant measurements of independent variables in Experiment 6

4.5.3 *Results and data analysis*

The purpose of this study was to evaluate the effects of psychological, prosocial, financial, and demographic variables on SRI behaviour. However before conducting the main analysis descriptive results of the different measures were addressed (see Appendices 16). Continuous variables meet assumptions of normality necessary for regression analysis. No ceiling effects were observed.

4.5.3.1 *Investment game behaviour*

After reviewing the descriptive statistics the analysis turned towards the question of how each variable influences the investment behaviour in the investment game. As the focus of the analysis was to explain the proportion of funds allocated to the SRI fund, the dependent variable of the analysis was calculated as the amount of the €5.000 invested in the SRI fund divided by the sum of the amounts in the SRI and the conventional fund:

$$\mathrm{SRI}_{\mathrm{Proportion}} = \frac{\mathrm{Fund}_{\mathrm{SRI}}}{\mathrm{Fund}_{\mathrm{SRI}} + \mathrm{Fund}_{\mathrm{Conventional}}} \tag{4.3}$$

As the dependent variable was a proportion (ranging between 0 and 1) beta-regression was chose as an appropriate method (Cribari-neto & Zeileis, 2010). The class of beta regression models as introduced by Ferrari and Neto (2004) is useful for modelling continuous variables that assume values in the open standard unit interval $(0, 1)$. Because in some cases y (the proportion) assumed the extremes (0 and 1) the transformation $(y * (n - 1) + 0.5/n$, where n is the sample size was applied (Smithson & Verkuilen, 2006). Standardized z-scores were calculated for all continuous variables. The categorical variables, Label, Public portfolio, and Gender were dummy coded, whereas for the donations the amount donated to each charity was introduced. The total amount was excluded because it is a linear function of the individual amounts [10].

In order to look for differences in SRI behaviour, between investors who already hold SRI funds and investors who only hold conventional investments the same beta regression was repeated for each subgroup of investors. Table 4.11 reports the results of all three regressions. In order to test whether the observed differences are significant, a *investor type* dummy variable was created and interaction terms of the dummy with all terms were introduced in the initial beta regression (for a table see Appendices 16).

Overall, the model for all investors (1), and conventional investors (3), explained only a limited amount of SRI behaviour, as the pseudo R^2 (.27 and

10 Separate analysis was ns and is not reported here.

.36 respectively) indicate. The model for SRI investors, on the contrary, was able to explain a great part of variance in SRI behaviour (pseudo R^2 = .76), and this despite the smaller sample size. In all three models, the proportion invested in SRI funds significantly exceeds the average, and as one would expect, this effect is strongest for the SRI investor population.

Financial perceptions. The first group of measures concerned the constructs related to the three perceptions of riskiness of SRI, financial performance of SRI, and the ESG labelling of mutual funds. According to Table 4.11 one measure showed a significant impact on the proportion SRI investors invest in the socially responsible fund. Perceived riskiness of SRI proved significant predictor of investment behaviour. The more participants agreed that SRI is less risky than conventional investment the more they were likely to invest a greater proportion in SRI mutual funds in the game. With regards to the hypothesis the study finds support for H1a in the case of SRI investors but not conventional investors. H_1b, and H_1c, are not supported. As for hypothesis H_1d, no significant interaction effect was detected for SRI investors.

Psychological factors. The second group of measures concerned a number of psychological variables, thought to influence SRI behaviour. Overall three measures showed a significant impact on the proportion invested in the SRI fund: Delay of rewards, the belief that SRI can improve governance, and SRI expertise. No group differences were observed for the three measures (cf. Appendices 16.4). The significant effect of delay of rewards suggests that investors with the capacity to inhibit temporal discounting are more likely to have higher SRI allocations. Investors who think that SRI can improve corporate governance are also more likely to invest. Finally, both SRI and conventional investors with expertise in SRI are less likely to invest. That is, the effect predicted in H_2h is found to be in the opposite direction.

Nevertheless when the fund had received a label SRI experts were more likely to invest. The moderating the effect of a label on SRI expertise (H_2f) shows is significant in all three models. Interestingly, a label also increases the likelihood to invest of investors with investment expertise, but only for those invested in SRI.

General consumer effectiveness only plays a role for those who are already invested in SRI. This is shown by the significant likelihood increase in SRI behaviour for investors who believe in the effectiveness of individual consumer actions in Model 2 (Table 4.11 and the absence of this effect in Model 3. A test of the difference between the regression coefficients of the two populations was also conclusive (cf. Appendice 16.4). H_2a, H_2b, H_2d, H_2g, and H_2i are not supported.

Finally, label moderated the effect of the perception of SRI information abundance (H_2j). Those who thought that there was too much information involved in SRI were less likely to invest in SRI labelled funds.

Pro social attitudes. The pro-social valuation factors is the model, environmental, social, and governance valuation relate to an increased similarity in

]

	All investors (1)	SRI (2)	Conventional (3)
(Intercept)	0.51 (0.17)**	1.20 (0.32)***	0.51 (0.20)*
Riskiness of SRI	−0.02 (0.10)	0.61 (0.21)**	−0.11 (0.11)
Perceived SRI performance	0.00 (0.09)	−0.04 (0.20)	0.08 (0.11)
Label	0.05 (0.18)	−0.42 (0.32)	0.06 (0.21)
Altruism (donations)	0.08 (0.09)	−0.11 (0.16)	−0.15 (0.15)
Altruism (scale)	0.04 (0.09)	0.19 (0.20)	−0.03 (0.11)
Public portfolio	−0.09 (0.18)	0.10 (0.39)	−0.27 (0.22)
Self monitoring	0.06 (0.16)	−0.31 (0.31)	0.29 (0.20)
Delay of rewards	−0.22 (0.09)*	−0.41 (0.21)	−0.28 (0.11)*
Risk propensity	0.25 (0.15)	0.12 (0.34)	0.21 (0.17)
Cons.Effectiveness	0.06 (0.10)	0.83 (0.19)***	−0.14 (0.13)
SRI improve E	0.18 (0.13)	0.13 (0.30)	0.32 (0.16)*
SRI improve S	−0.12 (0.14)	0.31 (0.26)	−0.16 (0.18)
SRI improve G	0.24 (0.11)*	−0.09 (0.22)	0.15 (0.15)
SRI avoid complicity	0.10 (0.10)	0.19 (0.20)	0.15 (0.13)
Information abundance	0.00 (0.15)	0.23 (0.40)	−0.08 (0.17)
Investment expertise ($\sum$)	0.09 (0.18)	0.03 (0.37)	0.10 (0.21)
SRI expertise	−0.54 (0.17)**	−1.34 (0.43)**	−0.56 (0.19)**
WWF	−0.12 (0.11)	0.53 (0.27)*	−0.10 (0.13)
Econ. vs. environment	0.21 (0.10)*	−0.63 (0.20)**	0.42 (0.13)**
CARE	−0.07 (0.10)	−0.78 (0.23)***	−0.12 (0.12)
Econ vs. social	−0.16 (0.10)	−0.86 (0.20)***	−0.04 (0.12)
Transparency Intl.	−0.11 (0.10)	−0.15 (0.25)	−0.01 (0.14)
Age	−0.07 (0.11)	−0.09 (0.30)	0.01 (0.15)
Male	−0.09 (0.10)	−0.14 (0.20)	−0.22 (0.12)
Education	0.17 (0.09)	−0.08 (0.20)	0.22 (0.11)*
Clicks on funds	−0.19 (0.10)*	−0.61 (0.19)**	−0.16 (0.11)
Time to select funds	−0.04 (0.10)	0.90 (0.24)***	−0.12 (0.11)
Label:Risk of SRI	−0.32 (0.18)	−0.17 (0.39)	−0.12 (0.21)
Label:Invest. expertise	−0.29 (0.22)	1.17 (0.47)*	−0.45 (0.26)
Label:SRI expertise	0.44 (0.22)*	1.10 (0.53)*	0.50 (0.24)*
Label:ISR.Abon.2	−0.46 (0.19)*	−1.00 (0.51)*	−0.33 (0.21)
Public:Self monitoring	0.11 (0.19)	0.14 (0.35)	−0.15 (0.22)
Pseudo R^2	0.27	0.71	0.36
Log Likelihood	94.72	65.73	67.83
Num. obs.	196	53	143

***$p < 0.001$, **$p < 0.01$, *$p < 0.05$

Table 4.11: Proportion of SRI investments in investment game (betareg).

values of investors with SRI funds, in contrast to conventional funds. Conventional investors who place a great value environmental issues, are more likely to display SRI behaviour. However, SRI investors with high valuation for environmental, and social issues are less likely to display SRI behaviour. The differences between coefficients of the two populations are significant (cf. Appendice 16.4. Therefore H_3a, and H_3b, find support for the SRI investors population, H_3c is not supported.

Demographic variables. There were no effects of Age and Gender (H_4a, and H_4b). Higher education increased SRI behaviour likelihood in Model 3, but not Model 2 (H_4c). However, there was no interaction with the population variable. The two exploratory measures, time for decision, and clicks on funds, explained a significant proportion of variance in Model 2, but not Model 3. Both interactions with population were significant. SRI investors who seek information about the funds are less likely to display SRI behaviour, however if they take longer to make their decisions likelihood increases.

4.5.3.2 *SRI holdings*

The objective of the second analysis was confirmatory. The focus was to find out what variables influence SRI behaviour using the holdings data as dependent variable. Since the dependent variable was dichotomous (SRI or conventional investor) logistic regression analysis, an extension of linear regression, was chosen as the method (D. Hosmer & Lemeshow, 2000). Before performing the analysis experimental measures were removed from the dataset, because their interpretation would have been senseless [11].

Table 4.12 displays the results of the logit regression model. The null deviance and residual deviance help evaluate the overall performance of the model. Null deviance shows how well the response is predicted by a model with nothing but the intercept. Adding in the predictors decreased the deviance by 58 points on 28 degree of freedom. This is interpreted as a chi square value and indicates a significant decrease in deviance ($p<0.01$). The residual deviance is 161 on 167 degrees of freedom. We use this to test the overall fit of the model by treating this as a chi square value. A chi square of 161 on 167 degrees of freedom yields a $p=0.6162$. The null hypothesis (i.e., the model) is not rejected. The fitted values are not significantly different from the observed values.

The effect of gratification delay found in the previous analysis is confirmed: Investors with the capacity to inhibit temporal discounting are more likely to hold SRI funds. Precisely, for every one point increase in the gratification delay score, the odds of being invested in SRI increase by 0.635^2. Remember that higher scores, mean less ability to delay. From the pro-social values

11 In an exploratory approach we also introduced two interaction terms but did not find significant effects and will not report further

variables, donations to WWF (environment) are in a negative relationship to the odds of being invested in SRI. This measure was not significant for actual SRI behaviour in the investment game, however SRI investors showed significantly lower values for three other measures of values. Finally age and education seem to be demographic markers. SRI investors are more likely to be of an older age and to be better educated.

4.5.4 *Discussion*

This exploratory study examined private mutual fund investors attempting to explain the motivations that lead some investors to invest large shares of their portfolio in SRI themed funds, while other investors invest little or no money in those funds. From this study, two major conclusions can be drawn. First the explanatory power of the model is limited for conventional investors. This indicates that the variables that were incorporated in the study explain a greater part of the decisions of those who are already invested in socially responsible mutual funds. Second, the study indicates that different types of variables can be useful in explaining SRI behaviour with private investors. This study combined demographic measures, economic concerns, pro-social values, and psychological variables, and all proved to have some influence on the proportion invested in the socially responsible fund. Below these factors are discussed in more detail.

The importance of financial perceptions seems to be a matter of perceived riskiness of SRI. The finding is that investors who already hold SRI funds, raise their stakes in SRI if they believe that it is less risky. This finding nuances the findings of Nilsson (2008), who reports that perception of financial return is an important factor for SRI investment behaviour by predicting SRI holdings with perceptions of financial return. In this study we measured SRI behaviour in an investment game with a €5.000 incentive, and SRI holdings. While financial perceptions did not explain SRI holdings, SRI holder were more likely to invest again if they thought SRI was less risky. While this finding encourages retailers, to insist on the argument of lowered risk for SRI investors, it also confirms that SRI investors are not solely motivated by pro-social, altruist behaviour. They also pursue profit oriented goals.

Results also confirm that psychological factors influence SRI behaviour. Surprisingly it were not the traditional pro-social behaviour variables (altruism, image concerns, self monitoring), but the cognitive capacity to delay rewards that turned out to explain investments and investment holdings. Investors who care more about the presence, than the future (ie. temporal discounting) are less likely to be invested, and to invest in SRI mutual funds. This temporal discounting tendency tempts people to choose a small immediate reward over a larger delayed reward, simply because the first is immediately available. Such a choice can greatly sabotage the attainment of long-term goals and is difficult to resist.

	Investor type (logit)
Riskiness of SRI	−0.183 (0.236)
Perceived SRI performance	0.024 (0.196)
Altruism	−0.184 (0.206)
Self Monitoring	0.067 (0.213)
Delay of rewards	−0.635** (0.268)
Risk propensity	0.044 (0.227)
Cons.Effectiveness	0.099 (0.236)
SRI improve E	0.240 (0.315)
SRI improve S	−0.344 (0.295)
SRI improve G	−0.196 (0.262)
SRI avoid complicity	0.018 (0.236)
Information abundance	−0.329 (0.211)
Investment expertise ($\sum$)	0.057 (0.252)
SRI expertise	−0.010 (0.235)
WWF	−3.067*** (1.163)
CARE	−0.177 (0.362)
Transparency Intl.	−0.179 (0.307)
WIKI	0.547 (0.636)
Age	0.766*** (0.284)
Gender (F)	−0.120 (0.145)
Education	0.379* (0.207)
SelfMonitoring:Altruism	−0.172 (0.221)
Risk:Invest.experience	−0.256 (0.215)
Constant	−2.264*** (0.566)
Observations	196
Log Likelihood	-88.161
Akaike Inf. Crit.	219.782
Residual Deviance	161.782
Null Deviance	228.796
Note:	*p<0.1; **p<0.05; ***p<0.01

Table 4.12: Regression of investment holdings (logit).

One practical solution to reduce impulsive choices would be to exploit the hidden zero effect (Magen, Dweck, & Gross, 2008). It has been shown that the choice of larger rewards at a later point in time can be encouraged when the alternative outcome is made explicit. For example, if the conventional fund has a small short term, and the SRI fund a large long term advantage the framing of the investor's choice should be similar to the following: "Do you prefer, a small advantage now and no advantage later, or no advantage now and a large advantage in the long term?". One possible explanation for this is that the framing draws attention to the opportunity cost of each choice, and encourages people to choose the alternative that incurs the lower opportunity cost (ie; to forego the smaller, sooner reward).

The finding that perceived consumer effectiveness only increases SRI behaviour of those already invested in SRI but not the holdings is somewhat puzzling. One possible explanation would be that investors who hold SRI are better informed about its outcome and have made a more evolved judgement about its effectiveness. If their belief about SRI is disenchanted, or strengthened this affects their choices. Consequently it becomes very important for retailers to illustrate effectiveness of their products with existing customers.

Also a good knowledge of SRI reduces SRI behaviour with both populations, however when the ESG approach of a fund is certified by an independent label SRI experts even increase their investments. Further research is needed, in order to decipher this counter-intuitive finding. One possibility is that SRI experts are more fearful of free-riders and see the label as a guard against abuse.

The findings about pro-social valuations also need further inquiry. Higher valuations of environmental, and social issues are associated with less SRI behaviour. An explanation could be that the behavioural measures used suffer from compensatory ethics (Zhong, Ku, Lount, & Murnighan, 2009; Monin & Miller, 2001). Compensatory ethics are about the idea that a good moral action in one domain creates psychic moral credentials that lower the need for moral actions in subsequent situations (the inverse is true as well). This is supported by significantly lower overall donations after the game. Self report, measures were also taken after the game, so that it is possible that investors who had invested significantly more in SRI had acquired moral credentials and subsequently lowered their pro-social behaviour.

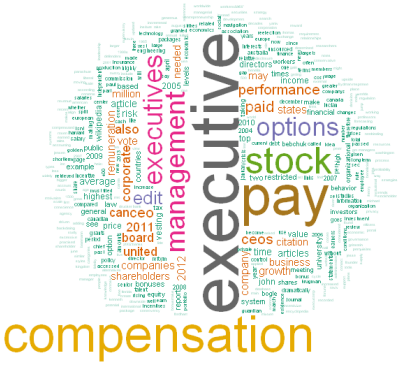
This study also found that socio-demographic variables are connected to SRI behaviour. Investment in SRI profiled mutual funds was found to correlate with education, as better educated conventional investors were more likely to buy a higher share of SRI funds, and SRI investors we likely to have a higher education. This finding has also been supported in previous studies (Rosen, Sandler, & Shani, 1991; Nilsson, 2008). While age did not influence on decisions in the game, SRI holders are older than holders of conventional investments. This finding probably documents the general shift in SRI from

a marginal phenomenon and niche product to a more mainstream investment vehicle (Sparkes & Cowton, 2004).

In conclusion, this study shows that financial, and extra-financial factors influence investors with regards to investments in SRI profiled mutual funds. That is, investors decisions are not always only made with simple profit maximizing rationality in mind. Instead, investors are, at least to a certain extent, incorporating their beliefs in the decision. One of the most influential factors is the delay of rewards, which is rather a cognitive ability to inhibit impulsive behaviour, than a deliberate decision. Investors combine these extra-financial factors with perceptions about the financial risks associated with SRI.

5

SOCIALLY RESPONSIBLE REMUNERATIONS



Chapter 5 is concerned with the situation in which people receive a remuneration in exchange for work they have dispensed. The two studies presented are entrenched in Anderson's IIT of cognition and its methodological framework. This framework is different from other approaches in many regards. It consists of a set of conceptions about the thought process and a set of tools to reveal the essence of this process: the cognitive rules used to integrate information. Because the conclusions that are drawn from the studies are intimately related to IIT method and theory a more detailed account for the interested reader is in the Appendices (18).

5.1 REMUNERATION STUDIES

Literature suggests two distinct fields of studying compensations: Executive compensations and workers remuneration. In the first field literature has abundantly focused on the principal-agent problem that occurs when companies are managed by executives: When the owners of a company, most often stockholders, delegate the management of the company to someone there is the possibility that the executive has interests conflicting with the

interests of the owners. To align the interests of executive and owners, the owner has to pay a price, in economic jargon known as the agency costs (Jensen & Meckling, 1976) [1].

The established solution to the agency problem was thought to be linking remuneration to performance (Jensen & Murphy, 1990a; Jensen & Meckling, 1976). The "pay for performance" idea was to add to the fix base salary of executives a revenue changing as a function of company performance. Stock options, for example give a holder the possibility to purchase a stock at a fixed price and fixed time. executives who are granted stock options thus have an incentive to keep the price of their company above the fixed price of the option.

From a CSR perspective this line of thought is close to SV theory (cf. Section 9.1.2) in that its solution to the agency problem was thought in alienation of financial interests of employees and shareholders. Consequently the solution was thought in terms of contracts that increase the employees remuneration if share prices rise. Of course this link is seldom straightforward, rather remuneration is linked to sales, production and similar data.

However, more recently it has been brought forward that the design of compensations is also partly a product of the agency problem and therefore inefficient (Bebchuk & Jesse M . Fried, 2003). One of the basic ideas of this research is that executives can indirectly influence on their own remuneration by setting industry references. A simplified example is that most executives are also members of boards of other companies and vote for the remuneration plans of their peers. When negotiating their own plan they are now able to point towards the plans of the other executives as a reference. For a survey of recent theories that extend traditional frameworks in favor of the efficiency of contracts see (Edmans & Gabaix, 2009).

This finding has provided an empirical base for a SV argumentation that complains that the shareholder value principle is not assured. Following SV theory it is the firms social responsibility to re-establish the pay for performance link. On the other hand, ST, CC and CSP would reasonably argue that there is a moral duty of firms towards stakeholders. According to CSP's institutional principle power comes with responsibility (cf. Section 9.1.1), ST insists on the principle of responsibility for corporate effects (cf. Section 9.1.3), whereas CC would appeal to managerial discretion in fulfilling the corporate citizen's duties towards the larger community at its origin (cf. Section9.1.4).

Workers remuneration studies, on the other hand, are the object of organizational studies that focus on remuneration fairness perception, motivation and legal aspects. The most prominent approach to fairness perception is probably equity theory which states that the ratio of a persons outcomes

1 Agency costs are defined as the sum of monitoring expenditures, bonding expenditures and a residual loss

and his own inputs must equal the ratio of his referent others outcome and input.

Motivational studies mainly aim to increase the employees motivation in order to increase company performance. In that motivational studies are somewhat linked to the agency debate because they seek to align the interests of the workers with the interests of the company.

Legal aspects concern mainly the protection of workers. In most industrialized countries or example, employers must provide workers with remuneration insurance (eg. medical bills or injuries). Social Security must be paid by the employer (in addition to the amounts deducted from employees remuneration) and employers must pay for unemployment insurance against the event that their job is eliminated.

Interestingly in both fields of study the dichotomy of normative and economically motivated approach of CSR as described by Wühle (2007) emerges (cf. Section 9.1). Is action against excessive executive bonuses economically motivated (the solution to the agency problem has been hijacked) or a matter of duty towards the society? Should workers wages be fair because this motivates them to work harder and increase production or does power come with responsibility and there is a corporate duty towards individuals.

The contribution of CSR scholars to these two fields has been connected to structuring sustainability performance into remuneration packages. That is to say helping to design incentive systems that reward not only financial performance but also sustainability. It is important for such an approach to identify the types of incentive systems that could be used, the tasks and employees who can be rewarded, the type of information that is needed to make sustainability linked incentives function well and methods to determine whether such systems are working.

The following study does not take part in the controversy whether the principal-agent problem can be solved within the realm of linking remuneration to performance or not, nor does it seek to reward executives or workers for sustainability. Rather it borrows from those studies the elements that constitute remuneration situations, in order to conceive ecologically sound descriptions submitted to the judgement of French people. The intention is to introduce a psychological measure of the acceptability compensations by inferring peoples' weights and combination rules of the factors of the plans (cf. IIT in Section 18).

Fathoming out the rules that people use to judge the acceptability of compensations it administers to CSR theorists and practitioners an original mapping of how the smallest unit of society reasons about compensations. It is not entering the political debate about compensations received after companies filed for bankruptcy or received tax payer money. In many ways, the public outcry about the colossal paychecks during the US housing crisis witnesses a general feeling of injustice and ought to be treated by legislators. In

lieu thereof, the emphasis on ecological factors will favour the practicability of the findings.

5.2 EXECUTIVE REMUNERATION PLANS

5.2.1 *Introduction*

Recently, people have been concerned with the high levels of chief executive compensations. Frequently, executive compensations become controversial. Are these compensations excessive? What justifies these compensations? Justification of such large sums of compensation is traditionally linked to value creation (Jensen & Murphy, 1990b) (cf. Section 9.1.2). In fact, a significant portion of executive remuneration results from exercising stock options. And during the bull markets those stock options were often valuable. Yet, ordinary working-class people seem outraged by the shocking contrast in remuneration rises: annual executive remuneration at large companies rose 54 percent, whereas remuneration rises of average workers were between 3 to 5 percent, during the same period.

Obviously this public outcry has raised awareness for CSR issues in executive compensations. As we have seen in Chapter 3.4 most CSR theories hold the view that companies are accountable to society, at least to some extent (Crane, 2008). CSR theory also describes the voluntary contribution of companies to sustainable development that goes beyond the legal requirements (compliance). Further, CSR stands for responsible business conduct in the actual economic activity, in environmentally relevant aspects, in relations with employees at the workplace, and in exchanges with stakeholders.

A first issue is to justify whether stakeholders are a restrained group of people directly linked to the company or include any group who is affected by the corporation (customers, suppliers, owners, employees and local communities) (R. E. Freeman, 1984). If one accepts the wider definition one is forced to embrace government intervention in order regulate excessive compensations.

A second issue is whether one believes the motivation for CSR should be economic or normative (Wühle, 2007). The normative approach justifies regulatory pressure from governments and transnational institutions, that require social responsibility from corporations. Thus the normative approach would be in line with restrained ST.

The economically motivated approach, (in line with broad ST) tries to establish an intrinsic motivation for the implementation of CSR. It seeks to demonstrate that a voluntary, non-normative implementation of CSR is a benefit increase for the company itself. The reason given for this increase in benefits is the creation and valuation of intangible assets, such as trust, reputation, employee motivation and customer satisfaction.

Executive remuneration can be considered an economic variable because it is linked to workers remuneration fairness perceptions (Marcos & Sales, 2006). The argument is as follows: People evaluate the fairness of their own remuneration, in large parts through comparisons with others (Dornstein, 1989). Since remuneration fairness is linked to employee outcomes (Shaw & Gupta, 2001; Cowherd & Levine, 1992) and counterproductive behaviour at work (Cohen-Charash & Mueller, 2007), executive remuneration that is perceived as unacceptable can directly harm a companies profits. There are probably other intangible assets in question but I'm not aware of other empirical studies.

Executive remuneration packages are typically composed of (1) base salary, (2) annual incentives or bonuses, (3) long-term incentives, (4) executive perquisites, (5) executive benefits (e.g., health insurance, life insurance, and pension plans) and (6) remuneration protections (Burton S. Kalinski, 2007; Murphy, 1998).

Base salaries are the fix part of executive remuneration. They are typically determined through benchmarking, based primarily on general industry surveys and supplemented by detailed analysis of peer companies. Firm size is traditionally an important determinant of base salary. For small sized companies in France mean base salary is €51.281. Since this part is fixed it is particularly attractive to risk adverse executives.

Virtually all for profit companies offer an annual bonus plan covering executives and paid annually based on a single year's performance. Those annual bonuses are largely explicit with a limited role for discretion. The most prevalent performance measure as reported by surveys is earnings. Other measures include, EBIT, EVA, Sales, Customer satisfactions and stock price (Murphy, 1998).

Long term incentives are mainly contracts which give the executive the right to but a share of stock at a specified exercise price for a pre-specified term. Those options are typically non-tradeable and and become exercisable over time. A majority of US grants have a five to ten year term for their major part. The main purpose of these contracts is to give an incentive for a long term sustainable management approach.

In addition to monetary remuneration, executives receive different types of perquisites. Such executive perks include the luxurious office, the executive dining room, special parking, use of a company airplane, company-paid membership in high-class country clubs and associations, and executive travel arrangements. Many companies even offer executives tax-free personal perks, including such things as free access to company property, free legal counselling, free home repairs and improvements, and expenses for vacation homes or boats (Burton S. Kalinski, 2007).

Since executives don't grow younger, pension plans have also become part of remuneration negotiations. Having lived with high revenues for several years during their active years, executives are eager to keep those revenues.

Advantageous pension schemes have been designed that allow executives to perceive a fixed a percentage of their salary after retiring.

Another remuneration that became popular recently is the so called remuneration protection - or golden parachute - a protection plan for executives in the event that they are forced out of the organization. Such severance frequently results from a merger or hostile takeover of the company. The golden parachute provides a significant one-time sum to the departing executive.

Based on previous studies in moral decision making (Muñoz Sastre, Peccarisi, Legrain, Mullet, & Sorum, 2007; Nann et al., 2012; Frileux, Munoz Sastre, Antonini, Mullet, & Sorum, 2004; Guedj, Munoz Sastre, Mullet, & Sorum, 2006; Guedj et al., 2005; Kpanake & Mullet, 2011) I expect the integration process that participants use to combine information about all components of executive compensations to be a complex one. The term *complex*, expresses the view that these factors are expected to interact.

In a nutshell, the study aims at revealing the rules people use to judge the acceptability of executive compensations. Thus providing CSR practitioners and theorists with democratic empirical results on morally superior designs of remuneration schemes.

5.2.2 *Experiment 7*

5.2.2.1 *Method*

As in the many studies conducted in the field of empirical ethics (eg. Kpanake & Mullet, 2011; Nann et al., 2012; Teisseyre, Mullet, & Sorum, 2005), the method was an application of Functional Measurement (Anderson, 2008). The study was approved by the Ethics and Work laboratory of the Institute for Advanced Studies, Paris, France.

The participants were unpaid volunteers recruited and tested by one student trained in the application of Anderson's methodology. Participants were contacted individually, explained the study, and asked to participate. Subsequently, the experimenter obtained informed consent and arranged when to administer the experiment. Of the 92 persons contacted, 53 (57.6%) participated (Mean Age = 23; 29 women, 24 men).

The material consisted of 54 cards. The vignettes were composed according to a three within-subject factor design: Base Salary (€30.000, €60.000, €90.000) * Bonus (2%, 4%, 6% of annual turnover, or 2% 1 year + 2% 5 year average turnover) * Supplementary benefits (All small, High fringe benefits, high fringe + pension plan, High fringe + pension plan + remuneration protection), 3 * 4 * 4. Six vignettes of this design were duplicated and a supplementary information stating that the company is a leader in sustainability and has considerably reduced CO^2 emission was added.

The question under each vignette was, "To what extent do you think that such a bonus policy is acceptable?" The rating scale was an 10-point scale with a left-hand anchor of "Certainly not" (1) and a right-hand anchor of "Certainly yes" (10). An example vignette is the following:

Mr Ramolin is chief executive of Sanobi company (≈ 12.000 workers, in France and the rest of the world)
His base salary is €30.000
In addition, he receives 2% of the annual turnover. This bonus is calculated on the previous years turnover. There is no bonus calculated on a longer time-frame that would incentivize a sustainable management approach.
He has only little fringe benefits (a company car).
He has an average managers pension plan.
In case of early departure, he would receive a bonus of only €50.000.

The cards were arranged by chance and in a different order for each participant. The participants answered additional questions about age, gender, and educational level.

5.2.2.2 *Procedure*

The site was either a vacant room at the university. Each person was tested individually. The session had two phases. In the familiarization phase, the experimenter explained what was expected, and presented each participant with 18 vignettes taken from the complete set. For each vignette, the participant read it out loud, was reminded by the experimenter of the items of information in the vignette, and then made an acceptability rating by putting a mark on the rating scale. After completing the 18 ratings, the participant was allowed to look back at his or her ratings and to compare and change them. In the experimental phase, each participant gave ratings for the whole set of 36 vignettes, working at his or her own pace, but was no longer allowed to look back at and change previous responses. In both phases, the experimenter made certain that each participant was able to grasp all the necessary information before making a rating.

The participants took 20-40 minutes to complete both phases. The experimental phase went quickly because they were already familiar with the task and the material. The participants knew in advance how long the experiment would last. They did not complain about the number of vignettes they were required to evaluate or about the credibility of the proposed situations. They then completed the questionnaires.

5.2.3 *Results*

For each of the 54 scenarios in the experimental phase, the distance was measured between the left anchor (0) and each answer given by the participant on the rating scale. All subsequent analysis were based on these measures of distance. The overall mean value of all the ratings was 4.46; that is, close to the midpoint of the response scale. The lowest mean rating, 1.88, and the highest mean rating, 7.54, were quite distant from the possible minimal and maximal answers (1 and 10). There was thus neither ceiling nor floor effect to complicate the interpretation of the results. In all subsequent analysis age and gender were controlled for.

An ANOVA was conducted on the raw data. The design was Base salary * Bonus * Extras, 3 * 4 * 4. Because of the multiplicity of comparisons, the significance level was set at .005. All three factors had significant effects (Table 5.1. A lower base salary was more acceptable. Post-hoc analysis, using the Tukey honestly significant difference test, showed that the mean acceptability value observed when the base salary of a executive was €30.000, acceptability was greater (M = 5.65, SD = .19), than when it was €60.000 (M = 4.52, SD = .1) and €90.000 (M = 3.47, SD = .11). Extras were also a significant factor of executive remuneration acceptability, $p < .00$. Mean acceptability was greatest when there were only little extra compensations (M = 5.9, SD = .12) than when large fringe benefits (M = 4.8, SD = .13), large fringe benefits and a generous pension plan (M = 4.2, SD = .10) or large fringe benefits, a generous pension plan and a remuneration protection (M = 3.15, SD = .15) were added. Performance based bonuses were significant, $p < .00$ but accounted for little variance. When the performance based bonus was 2% of turnover, mean acceptability was highest (M = 4.79, SD = . 11) and lowest when it was 6% of turnover (M = 4.32, SD = .10). The difference in means is only .47. The 2% 1 year + 2% 5 year sustainable bonus was not different from the other conditions in post-hoc analysis.

Four interaction effects were significant (cf. Table 5.1). The highest interaction effect involved all three factors and is shown in Figure 5.1 . When there was a little base salary, a small performance based bonus and few extras acceptability was highest (M = 7.55, SD = .16). It was lowest when €90.000, 6% and large extras were granted to executives. However the opacity of the interactions (for example the effect of a long term bonus is inverted, when base salary is high, fringe benefits and pension plans are granted) makes interpretation intricate. One explanation for this kind of pattern is the presence of multiple ideologies. That is different groups of participants follow separate, eventually conflicting rules during the information integration process. Recent research has revealed such pattern in many areas related to moral questions (Kpanake & Mullet, 2011; Nann et al., 2012; Kamble, Sorum, & Mullet, 2012).

Factor	df	MS	F	p	η^2
BASE	(2/104)	1012	74.7	.00	0.58
PERFORMANCE	(3/156)	25	6.2	.00	0.11
EXTRA	(3/156)	853	146.4	.00	0.74
BASE*PERFORMANCE	(6/312)	4.64	2.43	0.02	0.04
BASE*EXTRA	(6/312)	4.82	5.08	0.00	0.09
PERFORMA*EXTRA	(9/468)	6.19	6.95	0.00	0.12
BASE*PERFORMANCE*EXTRA	(18/936)	3.88	4.12	0.00	0.07

Table 5.1: Repeated Measures Analysis of Variance with Effect Sizes and Powers

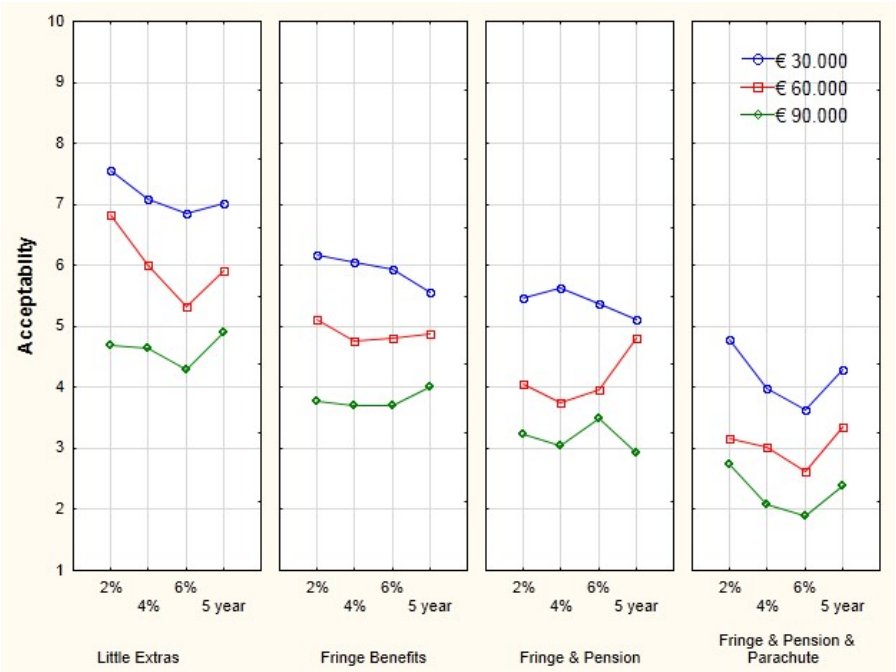


Figure 5.1: Acceptability of executive compensations across levels of Base Salary (3), Bonus (3) and Extras (4)

In order to identify groupings of participants, a cluster analysis was performed on the raw data in accordance with Hofmans and Mullet (2011) the recommendations, that is, I used K-means clustering (Euclidean distances), a non-hierarchical centroid-based method. This technique uses all data points and, moreover, is less susceptible to outliers and the distance measure used.

Two clusters of participants were identified. They are shown in Figure 5.2, with mean acceptability rating pooled across levels of base salary and extras. The first cluster was termed "Rather Unacceptable" because the responses were mostly on the left hand side of the scale (M = 4.13, SD = .09). This cluster is shown in Figure 5.2 (left panel). For participants in this cluster, acceptability ratings in the two most favourable scenarios were the only ones that were slightly above the midpoint of the acceptability scale (M = 6.43 and M = 6.18). Also it did not matter to them whether the base salary was €30.000 or €60.000. Only very high base salaries are considered less acceptable. When there were large fringe benefits a generous pension plan and a remuneration protection acceptability never was greater than 2.63.

The second cluster was termed "Depending on circumstances" because acceptability were well dispersed above and below the midpoint. For the participants in this cluster the most important factor are the three levels of the base salary. When the base salary is small the remuneration is always acceptable, independently from the extras. If base salary exceeds €60.000, however there cannot be any high extra compensations and mean acceptability ratings are lower then if there is a small base salary with all extra benefits. When base salary is €90.000 the remuneration is always unacceptable.

These visual, impressions were confirmed by a second analysis of variance conducted on the raw data including Cluster as a between subjects factor. The design was Cluster * Base Salary * Performance Bonus * Extras 2 * 3 * 4 * 4, $F(18/918) = 3.5$, $p < .00$.

An independent sample t-test comparing the overall mean of scenarios that included the CSR from the companies to the scenarios without did not reveal any differences, ns. However equality of variances could not be assessed (Leven's test, ns.) and standard errors were greater in the CSR scenarios.

Analysis of variance was conducted to explore eventual inequality in variances between groups. The design was Cluster $*$ CSR, $2 * 2$. A significant interaction was found, $F(1,51) = 20,48$, $p < .00$. It is show in Figure 5.3. Cluster 1 judges the acceptability of executive compensations more acceptable in companies that are leaders in CSR and CO^2 emission reduction (M = 5.13) than in regular companies, $p < .0$. This is not the case for cluster 2, ns. Overall, Cluster 1 had higher mean acceptability, $p < .00$.

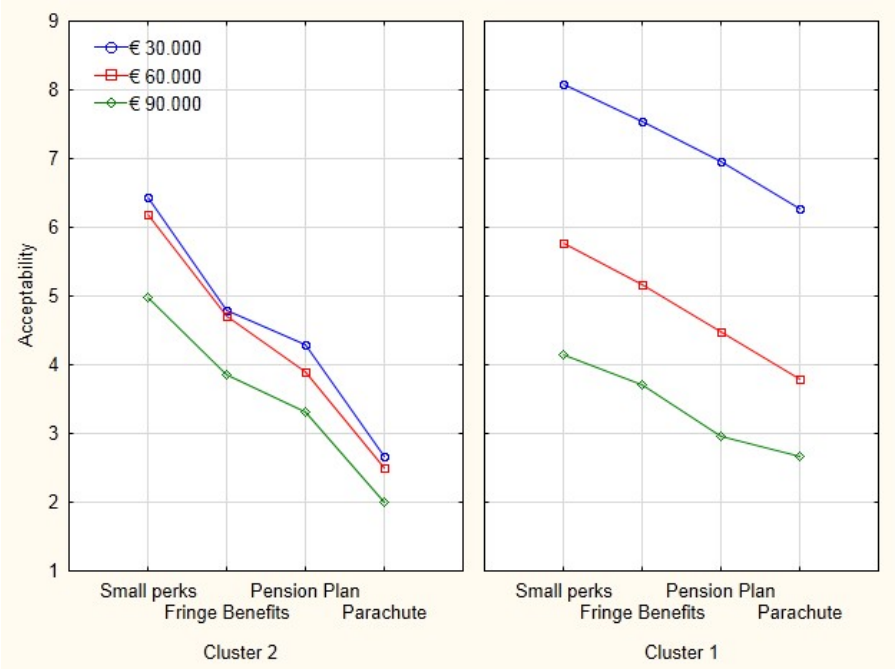


Figure 5.2: Acceptability of executive compensations across levels of Base Salary (3) and Extras (4) for Cluster 1 and Cluster 2

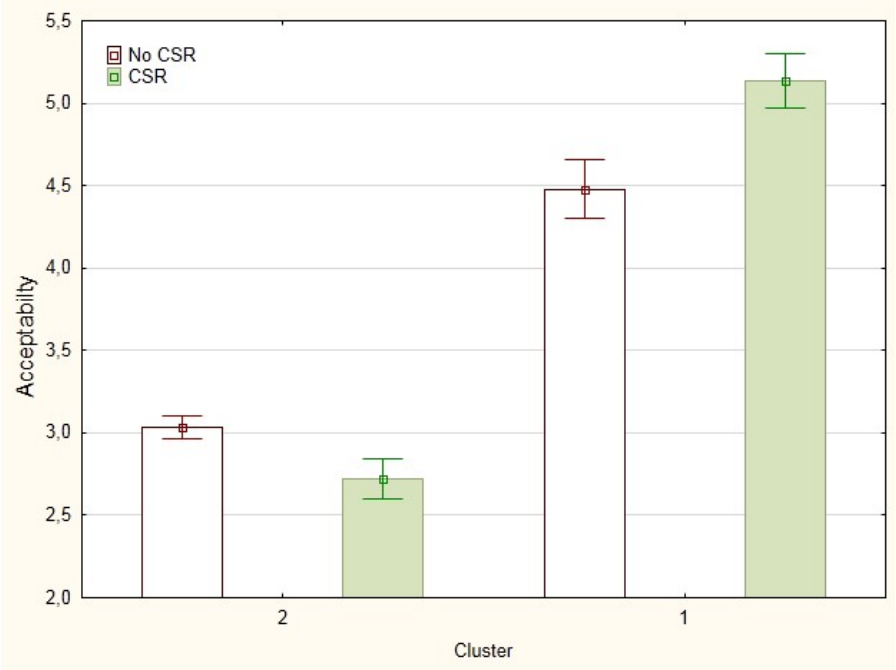


Figure 5.3: Cluster 1 judges remunerations for executives of companies with a good CSR record more acceptable than when there was no CSR record. This is not the case for Cluster 2.

5.2.4 *Discussion*

Peoples' acceptability of executive compensations was best explained by the general context provided through the amount of the executives base salary and extras, and individual differences between respondents cognitive integration rules. When the whole sample was considered increasing extras like fringe benefits, pension plans and remuneration protections lowered acceptability judgements in a linear manner. Also a lower amount of the executives base salary added to acceptability. Surprisingly the effect of the performance based bonus part of the remuneration plan was weakest, and did not seem to follow a consistent pattern.

Exploratory analysis revealed the presence of two groups of participants using distinct rules to integrate information about executive remuneration. The first group found executive compensations generally unacceptable but could tolerate compensations when the base salary was small or medium and no extras were granted. The second group used the scale to a larger extent and mainly thinks that executive compensations are acceptable when the base salary is small. As compared to the first group they think that €30.000 and €60.000 are not equally acceptable. Extras seem less important for this group.

However, because of the small sample size it is recommendable to further inquire heterogeneity of peoples' views on compensations. Of particular interest are executive bonus payments. First, because they often constitute the major part of executive compensations (Murphy, 1998) and seem almost irrelevant for people. And second, because persisting incoherence in the data. For example the positive effect of a long term five year remuneration is not present for cluster 1 when fringe benefits and a pension plan are granted, however it is there when a supplementary remuneration protection of €500.000 is installed. This kind of pattern could be an indicator of more than two groups with different views on executive remuneration as found in medical ethics (Kamble et al., 2012; Nann et al., 2012; Teisseyre et al., 2005) or CSR (Devinney, T.M., Auger, & Eckhardt, 2010) and SRI (Hoepner & David McMillan, 2009).

Exploratory analysis further revealed different views on the question whether executive remuneration should be linked to sustainability performance. The first group of participants, those who have generally lower acceptability, does not think that executives with a good sustainability track record should receive extra considerations. Their remuneration plans are judged exactly the same as the ones of their less responsible peers. The second group, people with generally higher acceptability of executive remuneration, do think that socially responsible executives should receive extra credentials.

Economists have long found that it's not how much is paid but how (Jensen & Murphy, 1990a). However their analysis has mostly concerned the me-

chanics of incentive structures and in how far interests of the company are equal to the executive interests. The analysis qualifies this finding by providing preliminary evidence that general acceptability of executive remuneration is probably less concerned with the nominal amount of the remuneration then with policy factors.

The findings are relevant for academics and practitioners of CSR. Workers perception of remuneration fairness is linked to many factors, such as employee theft, job satisfaction and product quality (Morand & Merriman, 2012), that are relevant in organizational management. Therefore, practitioners are encouraged to be alert to individual differences about remuneration plans in a companies' code of conduct intended for use in managerial decision making (Crane, 2008). Further, a particular attention should be devoted to the interplay of the base salary and supplementary attentions granted to executives.

Academics in the field of CSR will find in the results preliminary guidance towards a democratic approach to socially responsible remuneration plan. Indeed, most theoretical approaches admit that companies do have obligations (Jones, 1980; Evan & Freeman, 1988), duties Carroll (1991) and *responsibilities* (Wood, 1991a) for social problems. Nevertheless most theories have failed, so far, to develop a practical framework for the integration of a correct view of human nature, business, and society, and the relationship between business and society (Crane, 2008). The findings are a first step towards such a democratic view.

5.3 ACCEPTABILITY OF EXECUTIVES BONUSES AND REMUNERATION POLICIES

5.3.1 *Introduction*

People hold passionate opinions about compensation. Whether it is the public outcry about greedy CEOs' who, despite leading their companies to historic losses, walk away unrepentant with huge annual pensions or blue-collar workers who think their wages are unfair, virtually everyone has an opinion on how compensations should be determined.

There is only little empirical work on laypersons' opinions about compensation policies. Instead scholars have described how social actors' discourses helped to legitimate bonuses (Joutsenvirta, 2012), or conceptualized important ethical notions like equity and equality (Morand & Merriman, 2012). Others have successively considered descriptive, normative, and prescriptive perspectives (Dunham & Washer, 2012). Yet the public debates about topics like salary caps, minimum wages or banker bonuses indicate that everybody feels concerned.

The traditional economic perspective considers the rise in executive compensation as a matter of firm competition for a limited number of skilled executives or as a way to align managerial and stockholder interests (Jensen & Murphy, 1990a). From a lay people's perspective, however, executive compensation is above all an issue of social justice: It does not matter much whether, for instance, the "incentive zone" bonus curve follows a linear, a convex, or a concave function. Kpanake and Mullet (2011) have elaborated four types of justice: Retributive justice, procedural justice, distributive justice, and restorative justice. The present study aimed to examine the extent to which each of these types of justice is associated with perceived acceptability of bonuses and compensation plans among lay people.

5.3.1.1 *Four Types of Justice*

Higher compensation for managers is often justified because managers might have to work late and on weekends, and pick up phone calls in the night. This is a matter of retributive justice. According to retributive justice, the amount of the bonus must be "equal" to the burden inflicted by the work expended. In other words, the retributive justice is to compensate for restricting the executives individual freedom. People generally express retributive justice as a number of monthly wages. Indeed many people in a company receive a thirteenth month; that is, an exceptional annual bonus that represents generally one months' salary. We consider this extra month of salary as the proper expression for laypersons reasoning about bonuses.

Procedure is as important to stakeholder theory as the final distributions (R. Phillips, Freeman, & Wicks, 2003). Procedural justice relates to the transparency and fairness of the decision making process (Thibant & Walker, 1975; Lind & Tyler, 1988). This factor draws on the question of who determines compensation and how it is determined (Murphy, 1998). Fairness in the resource allocation process is unattainable if the person who makes the decision of allocation has conflicting interests (e.g., deciding on the most efficient solution for the company and, at the same time, maximizing his outcome as a beneficiary of the decision Bebchuk & Fried, 2006). Lay people would not care too much about the mechanisms by which executives influence on their own pay. Rather, they would consider whether the calculation of the bonus is comprehensible and traceable, and follows clear rules or not. The more the calculation follows clear rules, the more bonuses would be perceived as acceptable.

Donaldson and Preston (1995a) have argued that an underlying principle of distributive justice must firm up property rights. Classical distributive justice theory is a matter of socially fair allocation of goods in society: It is therefore primarily concerned with outcomes (Eatwell, Milgate, & Newman, 2008; Rawls, 1971). For instance, the extent to which all categories of employees in a company receive bonus payments is a good proxy for distributive justice. In other words, the acceptability of compensation will depend on

attribution, i.e. whether only senior executives, junior and senior executives or everyone (executives, management and workers) are attributed bonuses.

Finally, restorative justice, sometimes called reparative justice, applies to the needs of victims and offenders and is probably the oldest ethical principle applied in compensation: The history of compensation for bodily injury began shortly after the advent of written history itself (Guyton, 1999). For instance, a Nippur Tablet from ancient Sumaria outlines the law of Ur-Nammu, king of the city-state of Ur, a law that provided monetary compensation for specific injury to workers' body parts, including fractures (Kramer, 1988). Special bonus for employees who have had hazardous working conditions or have suffered from work accidents is an instance of restorative justice. Experiment 1 Experiment 1 explored lay peoples' judgements of the acceptability of companies' compensation policies as a function of the extent to which these policies implemented the four types of justice discussed above. Our main hypothesis was that, as in most previous studies on people views regarding ethical matters (see Nann et al., 2012; Kamble et al., 2012) qualitatively different personal positions exist among participants.

5.3.2 *Experiment 8*

5.3.2.1 *Method*

As in the many studies conducted in the field of empirical ethics (e.g. Nann et al., 2012; Kamble et al., 2012; Teisseyre et al., 2005), the method was an application of Functional Measurement (Anderson, 2008). The Ethics and Work laboratory of the Institute for Advanced Studies, Paris, France approved the study.

Participants. The participants (30 women, and 39 men aged at average 24 years) were unpaid volunteers recruited and tested by one student trained in the application of the functional measurement methodology. The experimenter contacted participants individually, explained the study, and asked them to participate. Subsequently, the experimenter obtained informed consent and arranged when to administer the experiment. Of the 112 persons contacted, 69 (61.6%) participated.

Materials. The material consisted of 36 vignettes. They were composed according to a four within-subject factor design: Extent of the bonus policy of the company (every worker in the company vs. only executives) x Amount of bonus attributed (corresponding to about 1 vs. 3 months of salary) x Transparency of the bonus attribution procedures in the company (clear attribution rule, not very clear rules or completely arbitrary) x Existence of a special bonus for excess responsibility (corresponding to three months, one month or no special bonus), 2 x 2 x 3 x 3. An example of vignette is the following:

"The STATAGEM Company manufactures and sells appliances. Like many other medium-or large-sized companies it applies a bonus policy. In this company the principle of distribution for bonuses is: (a) everybody, top executives, managers and workers receive an average bonus, (b) equivalent to three months' salary; (c) the procedure for assigning the bonus is quite questionable (there are rules but they are not always rigorously enforced), and (d) there is no complementary bonus for jobs of great responsibility or hardship."

The question under each vignette was, *"To what extent do you think that such a bonus policy is acceptable?"* The rating scale was a 10-point scale with a left-hand anchor of *"Not at all"* (1) and a right-hand anchor of *"Completely"* (10).

Procedure. The site was either a vacant room at the university. The experimenter tested each person individually. The session had two phases. In the familiarization phase, the experimenter explained what was expected, and presented each participant with 18 vignettes taken from the complete set. For each vignette, the participant read the description aloud and after the experimenter had reminded her all items of information in the vignette, she made an acceptability rating by putting a mark on the rating scale. After completing the 18 ratings, the participant could look back at her ratings, compare, and change them.

In the experimental phase, each participant gave ratings for the whole set of 36 vignettes, working at her own pace, but was no longer allowed to look back, and change previous responses. In both phases, the experimenter made certain that each participant was able to grasp all the necessary information before making a rating. The participants took 20-40 minutes to complete both phases. The experimental phase went quickly because they were already familiar with the task and the material. The participants knew in advance how long the experiment would last. They did not complain about the number of vignettes they were required to evaluate or about the credibility of the proposed situations. They then completed the questionnaires.

5.3.2.2 *Results*

For each of the 36 scenarios in the experimental phase, we measured the distance between the left anchor (0) and each answer given by the participant on the rating scale. We made all subsequent analyses with these measures of distance. The overall mean value of all the ratings was 5.54; that is, close to the center of the response scale. The lowest mean rating, 3.13, and the highest mean rating, 8.59, were quite distant from the possible minimal and maximal answers (0 and 10). There was thus neither ceiling nor floor effect to complicate the interpretation of the results.

We conducted a cluster analysis following statistical recommendations by (Hofmans & Mullet, 2011) using k-means clustering (Euclidean distances), a non-hierarchical centroid based method. Outliers and the type of distance

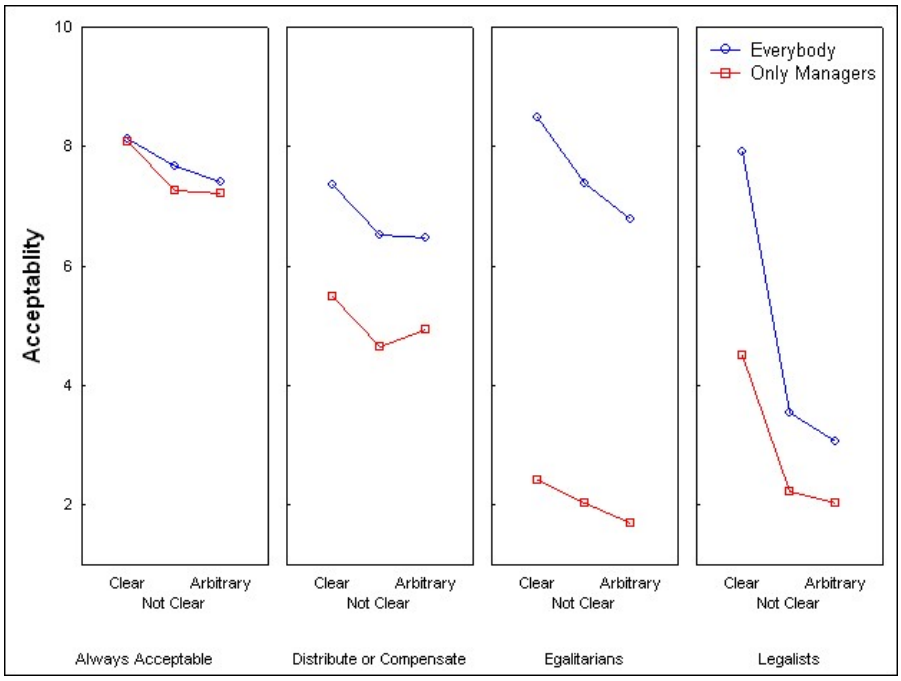


Figure 5.4: Four groups with structurally different acceptability judgements of compensation plans across levels of extent of distribution (2), and clarity of the procedure (3)

measure less influence this method. Further, it and makes immediate use of all data. Recent applications of the k-means clustering technique in the field of bioethics can be found in Nann et al. (2012), or Kamble et al. (2012).

We retained a four-cluster solution. Figure 5.4 shows the main results from this analysis. The first cluster was called "Always acceptable" because participants' ratings were always well above the midpoint (M = 7.62; SD = 0.22); that is, participants judged all compensation policies acceptable. Their judgements did not change much as a function of variations in the levels of the four justice factors. An ANOVA showed no significant main effects (see Appendix 17).

The second cluster was called "Distribute or Compensate" (M = 5.9, SD = 0.11). Participants in this cluster judged the acceptability of policies mainly as a function of the extent to which all employees benefited from bonuses (the distributive justice factor) and as a function of the existence of compensations for special responsibilities and/or hard work (the restorative justice factor).

In addition, the effect of the special bonus was stronger when only executives receive bonuses than in the opposite case. In other words, when the level of distributive justice was low, special compensations for people who had work accidents or who worked under harsh conditions gained in importance at the time of judging of the acceptability of policies. An ANOVA showed that the distributive factor and the restorative factor had significant effects, and that their interaction was significant (see Appendix 17).

The third cluster was called "Egalitarians" (M = 4.6, SD = 0.32). For the participants in this cluster, policies were always largely acceptable if a company gave all workers a bonus and always largely unacceptable if only executives receive bonuses. In other words, the distributive factor was, by far, the most important one for judging acceptability. For these participants, however, acceptability was also, but to a lesser extent, a function of procedural justice and distributive justice. An ANOVA showed that all three factors had significant effects (see Appendix 17).

The fourth cluster was called "Legalists" because of the great importance of clear procedure for them at the time of judging acceptability. Participants in this cluster have the lowest mean acceptability (M = 3.9, SD = 0.19). For these participants acceptability of compensation policies is mainly a matter of establishing clear rules for bonus compensations. It is also, although to a lower extent, a matter of distributive justice, and the two factors clearly interacted: The effect of clarity of procedure was even stronger when companies were granted a bonus to everyone than in the opposite case. An ANOVA showed that the procedural factor and the distributive factor had significant effects, and that their interaction was significant (see Appendix 17).

5.3.2.3 *Discussion*

Experiment 1 provided a detailed mapping of peoples' views regarding the acceptability of bonus compensation policies. We found four distinct positions. A first group of people showed itself to be insensitive to policy factors: They considered that bonuses were always largely acceptable. A second group of people judged bonus policies largely unacceptable; this group, however, considered as acceptable policies that have a transparent procedure to the condition that all employees benefit of them. A third group judged bonus policies rather acceptable. Judgements increased when companies gave bonuses to all employees and had established a clear procedure to determine the bonus. A fourth group considered bonus policies as largely unacceptable when a company only gave bonuses to executives. Policies with bonuses given to all employees were generally acceptable and the more so if there was a clear procedure.

5.3.3 *Experiment 9*

Experiment 2 explored lay peoples' judgements of the acceptability of chief executive officer bonuses as a function of the extent to which a company implements the four types of justice discussed above. Our main hypothesis was that, as in Experiment 1 qualitatively different personal positions exist among participants.

5.3.3.1 *Method*

The method was the same as in Study 1 (Anderson, 2008, 2001). The Ethics and Work laboratory of the Institute for Advanced Studies, Paris, France approved the study. Participants. As in Experiment 1 all participants (36 women, and 23 men, aged 23 years on average) were unpaid volunteers recruited and tested by one student trained in the application of Anderson's methodology. The experimenter explained the study, and asked to participate. He obtained informed consent and arranged when to administer the experiment. Of the 80 persons contacted, 59 (73%) participated.

5.3.3.2 *Materials*

The material consisted of 36 cards containing a vignette of a few lines, a question, and a response scale. The vignettes were composed according to a four within-subject factor design: Amount of bonus attributed to senior executives (corresponding to about 6, 12 or 18 months of salary) x Transparency of the bonus attribution procedures in the company (clear attribution rule versus obscure procedure) x Extent of the bonus policy of the company (only senior executives, middle/senior executives or every worker in the company) x Special bonus for excess responsibility and hardness of work or not), 3 x 2 x 3 x 2. Following is an example of one vignette:

Mr. Bouillot is CEO of Builtup Inc., a construction company. (a) This year Mr. Bouillot receives a bonus equivalent to eighteen months of his salary. This bonus rewards good management efforts. (b) It is calculated based on clear rules that take into account the benefits and the attainment of certain fiscal targets.(c) In this company, everyone, workers and managers, is given a bonus. This bonus varies with effective responsibilities. (d) Further, a special bonus is intended for people who have suffered from accidents, excess responsibility or harsh working conditions.

The question under each vignette was, *"To what extent do you think that such a bonus for senior executives is acceptable?"* The rating scale was an 11-point scale with a left-hand anchor of *"Not at all"* (0) and a right-hand anchor of *"Completely"* (10).

5.3.3.3 *Procedure*

The procedure was the same as in Study 1.

5.3.3.4 *Results*

Cluster analysis, using the technique from Experiment 1 was applied to the raw data after having controlled for ceiling and floor effects (lowest mean rating = 2.61); highest mean rating = 7.92).

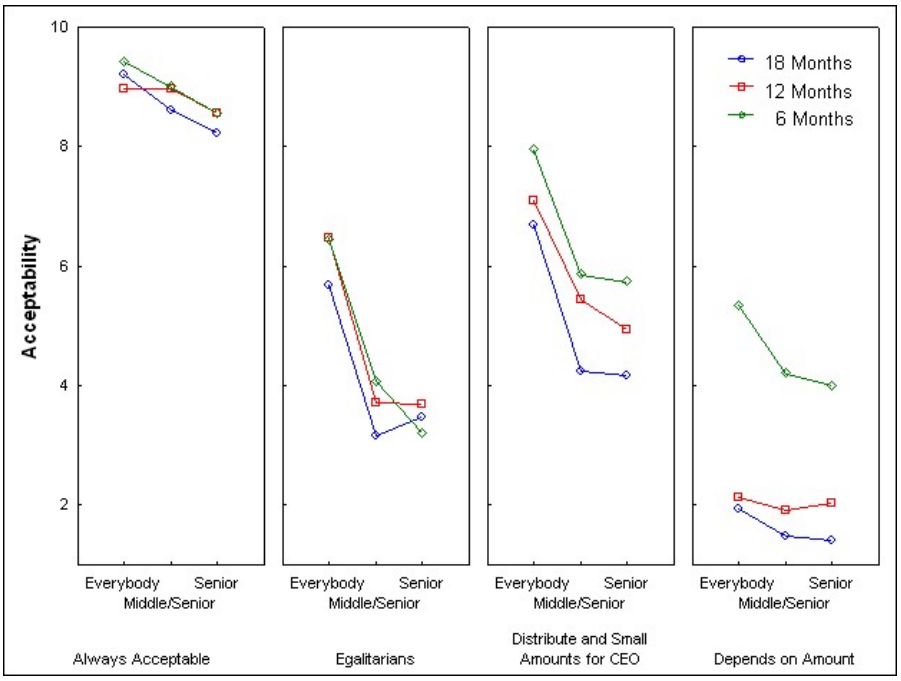


Figure 5.5: Four groups with structurally different acceptability judgements of compensation plans across levels of extent of distribution (3), and amount of the bonus (3)

As expected, participants responded in very different ways and we retained a four-cluster solution. Figure 5.5 displays the main results with mean acceptability ratings pooled across the extent of distribution and amount for each cluster. Four separate analyses of variance were conducted on the raw data of each cluster with a design of Extent x Amount x Procedure x Special, 3 x 3 x 2 x 2 (Annexes B). Owing to the great number of comparisons conducted, the significance threshold was set at .01.

We named the first cluster Always Acceptable, because acceptability ratings were well above the midpoint of the response scale (M= 5.7; SD=3). Participants judged bonuses for executives acceptable in any situation. Variations in the justice factor levels did not change their judgements very much, as is confirmed by a repeated measure ANOVA (see Appendix 17).

We named the second cluster Egalitarians (M=4.4; SD=1.9). For participants in this cluster executive bonuses were only acceptable if the company gives a bonus to executive, managers and all workers. This means that the distributive justice factor was by far the most important for acceptability judgements. Situations in which a company gave bonuses to executives and managers (but not workers) were as acceptable as situations in which only executives had a bonus.

Post-hoc Tuckey HSD tests confirm this finding. These participants also used information about a special bonus, the procedure and the amount for their judgements. ANOVA showed that restorative, procedural, and retributive justice effects were significant importance (Appendix 17). In comparison

to distributive justice, however, those other factors were of little importance. Furthermore, acceptability increased only when everyone received bonuses.

We named the third cluster distribute and small amounts (M=5.8; SD=2.4). Participants judged the acceptability of executive bonuses as a function of the extent to which all workers also received bonus payments (the distributive justice factor) and as a function of the amount of the bonus (retributive justice factor). Similar to egalitarians, participants' acceptability increased only when everyone received bonuses. Situations in which a company gave bonuses to executives and managers (but not workers) were as acceptable as situations in which only executives had a bonus. Post-hoc Tuckey HSD tests confirm this finding. Reducing executive bonuses gradually increased acceptably. For the participants the procedure used to establish the bonus (procedural justice) was also important, but to a lesser extent. ANOVA showed that the effects of Extent, Amount and Procedure were significant (Appendix 17).

Because of the great importance of the amount a company's executive received for judging the acceptability, we named the fourth cluster Depends on amount (M=2.72, SD= 1.6). Participants of this cluster judged the acceptability of executive bonuses as a function of the amount (retributive justice). Additionally, the effect of the amount was stronger when all employees received bonuses. In other words, when everyone received bonuses (distributive justice), small bonuses for executives gained in importance at the time of judging the acceptability of executive bonuses. ANOVA showed that Extent, and Amount had significant effects and that their interaction was significant (Appendix 17). Again, participants did not differentiate between the chief executives, and chief executives and managers conditions. It is noteworthy that in the most "favourable" scenario when the bonus is granted to all workers, the amount is only 6 month; there is a qualitative change within the answers of this cluster (M = 5.56, SD = 0.78). Indeed if these two conditions are satisfied, they deem executive bonuses acceptable.

5.3.3.5 *Discussion*

Experiment 2 provided a mapping of people's views on the acceptability of chief executive bonus compensations as a function of four justice factors. We found four distinct positions. A first group was insensitive to policy factors. For them executive bonuses were always acceptable. A second group of people judged executive bonuses largely unacceptable; however this group considered executive bonuses acceptable, if a company gave bonuses to all employees and if the amount of the executive bonus was small. A third group thought that executive bonuses were only acceptable if a company gave bonuses to all employees. A fourth group judged executive bonuses rather acceptable. However, the judgements were higher if everybody received a bonus and the executive bonus was small. This group deemed ex-

ecutive bonuses unacceptable when they were high and a company did not give employees a bonus.

5.3.4 *General Discussion*

We explored laypeople's views on the acceptability of compensation policies and executive bonuses as a function of justice factors using a technique borrowed from previous studies conducted in the domain of bioethics. As hypothesized, we found qualitatively different personal positions in both studies. A common position held by all but one cluster was that acceptability depends on distributive justice, ie. the extent of a company's bonus distribution. People judged executive bonuses and general compensation policies more acceptable when all employees received bonuses then if only a subgroup did.

Experiment 2 also showed that people judge distributive justice in a categorical manner. Indeed no group thought that executive bonuses were more acceptable in companies that gave bonuses to managers and executive as compared to companies that gave bonuses only to chief executives. In the three groups that were sensitive to distributive justice, executive bonuses were more acceptable only if all employees received bonuses.

In Experiment 1 a small minority of people considered that bonus policies were always acceptable, and in Experiment 2 a small minority of people considered that executive bonuses were always acceptable. In both studies, the group was not sensitive to justice factors and it is likely that the underlying ideology is the same: A company's only social responsibility is to increase shareholder values (Friedman & Friedman, 2002).

Additionally, Experiment 2 revealed that the amount of executive bonuses is not a function of retributive justice in the expected way. According to retributive justice, the amount of the bonus must "equal" the burden inflicted by the work expended and compensate for restricting the executives individual freedoms. However, participants find executive bonuses more acceptable in companies that give smaller amounts, suggesting that the equation is out of balance: People think that compensation for the restriction of executives' individual freedom is too high.

The direction of the effect of the nominal amount was inverse in Experiment 1 (non sig). As a result, it deserves to be examined in future studies whether amount of money has a direct effect on acceptability in the case of bonus attributed to workers and an inverse effect on acceptability in the case of bonus attributed to executives.

In view of the clarity and diversity of these findings, business ethics researchers can validly extended our technique of concrete scenarios, borrowed from the field of bioethics, to their field. Future studies on larger samples should check whether the four-position taxonomy found in the

present, study fully reflects the diversity of opinions in the public. They also should examine how classical constituents of executive bonuses, like the extent to which the objectives fixed by the company have been attained, the global, economic context in which the company has performed or the availability of experienced senior executives in the sector influence acceptability of bonuses.

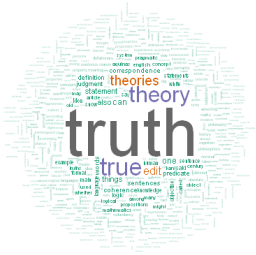
Finally, future studies should explore cultural aspects of lay people's ethics thinking about economic affairs. For instance, Walters, Hardin, and Schick (1995) have suggested that in Asian countries people take economic decisions usually taken by teams rather than alone. This may strongly influence the way people share rewards. The scenario approach used in the present study was flexible enough to allow meaningful comparisons between samples from different countries in other fields (e.g. Kamble et al., 2012).

Recent events at Volkswagen AG, where CEO Martin Winterkorn earned €17.5 million in 2011, compared with €9.3 million a year earlier anecdotally confirm our findings. He earned more than any other German executive ever did. However, there were almost no critics. This was the biggest executive salary in German history and labour union leaders were even defending it in newspaper interviews. How come? Volkswagen also decided to divide 10% of company's benefits amongst all 100.000 workers. Everyone in the company thus received an annual bonus of €7.500 in 2011.

Of course, €7.500 is little in comparison to €17.5 million, and objectively the distribution of the companies benefits is far from horizontal (after all, 10% are distributed equally to 100.000 persons whereas one person alone receives 0.23%). Nonetheless, social acceptability as outlined in the current article was broadly satisfied, which lead to the public reaction that we could have predicted.

6

THE CONCEAL REVEAL DILEMMA



6.1 INTRODUCTION

6.1.1 *Trade-off between financial and moral values*

A standard definition of CSR is that it is about sacrificing profits in the social interest (Appendice 9). For there to be a sacrifice, the company needs to voluntarily go beyond its legal and contractual obligations. CSR thereby accepts a large range of behaviors, such as being employee friendly, environment friendly, mindful of morals, respectful of communities where the companies' plants are located, and even investor friendly. Sometimes, the call for duty extends beyond company's immediate realm and includes supporting the arts, universities and other good causes (Bénabou & Tirole, 2010). A decisive element in this respect is individual altruism, the principle or practice of concern for the welfare of others and the opposite of selfishness. Numerous studies exist on altruism in experimental psychology.

Altruistic behavior responds to a blend of interdependent motivations. First, they are influenced by genuine, intrinsic altruism: to different degrees, everybody aspires to do good and help. Second, material incentives come into play: people are more likely to give to charities if contributions are tax deductible. Third, people are also sensitive to social and self-esteem concerns. How people behave defines what kind of person they are, in the eyes of others and, no less importantly, in their own.

The importance of social image concerns is generally demonstrated in experiments with public vs. private conditions. In and experiment by Griskevicius et al. (2010), for example, one experimental group reads a story in which they imagine to seek work and decide to join a large company. On their first day in the company building it is described with particularly strong statuary symbols such as the chic lobby. A control group reads the same story without the statuary symbol priming. Participants then must decide between a green product described as environment friendly and a non-green product described as relatively luxurious and powerful. In line with the costly signaling view they find that activating status motives led people to choose green products over more luxurious non-green products.

In Italy Lacetera and Macis (2008) conducted an experiment where blood donors were awarded gold, silver and bronze medals to those who donated the most frequently. There only was an effect of the medal on overall blood donations if the winners were published in a local newspaper. Similarly Vugt and Hardy (2009) showed that donors in a public goods game increase their donations if they are known to other participants.

The importance of self image is more tricky to demonstrate. Dana, Weber, and Kuang (2006) show, that when given the opportunity to ignore whether their actions actually hurt others, many people take advantage of this "moral wriggle room" to make selfish choices. In their main experiment participants can choose whether or not they want to know about which dictator game they are playing. In one A is the generous option, in the other one B is the generous option. Whereas truly generous people would always choose to know about which game is played and then choose the more generous option, half of the participants choose to stay ignorant.

In a more direct experiment Dana, Cain, and Dawes (2006) show that many people who would voluntarily share $10 with an anonymous other in a dictator game prefer to just take $9 for themselves and not face that choice. In the same stream of research Hamman, Loewenstein, and Weber (2010) show that many participants who would behave generously in a usual dictator game, delegate the sharing decision to a third party who is known for being biased in favor of not sharing resources. Said another way, economic agents are desirous to transmit the "dirty work" that they do not want to do themselves. Not directly choosing the selfish action seems to relieve them from the logical damage to self-esteem.

An interesting interaction between monetary incentives and social-image motivation was demonstrated by Ariely et al. (2009). In the experiments, participants had to perform different tasks to gain money for charitable causes in two experimental conditions. In the "private" condition, the only one who observes his effort and amount earned is the participant herself (in this way only her self-image can be involved). In the "public" condition all participants, and some other peers, observe each participants choices (in this condition both self- and social-image are involved). The first results, in line with the earlier findings, is that efforts are larger when they are public. The more notable finding is that the impact of material incentives weakens considerably (or even reverses) when they are public. Furthermore, this interaction only occurs when the task is performed for a good cause. In other words the negative impact of public does not occur when participants are simply earning money for themselves, or for an organization. Implicitly people seem to act as if doing good is desirable, but doing good to earn money is considered objectionable.

The idea that personal moral values are not measurable in monetary terms is well known in moral psychology. Most notably research on protected values (Baron & Spranca, 1997; Ritov & Baron, 1999), sacred values and taboo trade offs (A. P. Fiske & Tetlock, 1997; Tetlock, 2003) have well documented peoples animosity towards transgressing moral ideals in exchange of secular values.

Imagine that you had a fancy dinner with friends, splitting the bill among you all. Later on, you discover that your own check was never cashed, meaning that you (and you only) ate for free that night. Would you tell the story to your friends, or would you keep quiet about it? Or imagine that, just as former German President Christian Wulff, you benefited from a legal but unusually low-interest loan. Would you let the voters know, or would you try to stop the story from being published? Christian Wullf allegedly did the latter, and the subsequent public outcry led to his resignation in February 2012.

These two examples illustrate what I call the Conceal or Reveal Dilemma: the decision to hide or to disclose that one got something which others would want for themselves, and that it happened for no good reason.

My contention in this article is that individuals make this decision following idiosyncratic norms, rather than by rational cost-benefit calculations, or by the application of a universal norm. Critically, this sections reports four experiments showing that individuals do not respond to financial incentives in a paradigm called the Conceal or Reveal Game, and that they are split in terms of the norm they apply to the situation.

6.2 THE CONCEAL OR REVEAL DILEMMA

Consider that an agent A faces the Conceal or Reveal Dilemma when she receives a benefit with two characteristic features: secrecy and unfairness. *Secrecy* means that no other agent knows about the benefit unless they are the ones who intentionally provided it. *Unfairness* means that whatever agent A thinks of the deserved or undeserved nature of the benefit, she knows that others are likely to see the benefit as unfair if they learn about it. Agent A must choose between two options: keeping the benefit a secret (the Conceal option), or letting other agents know about it (the Reveal option).

6.2.1 *Cost and benefit resolution*

The standard, decision-theoretical approach to the Conceal or Reveal Dilemma would be for a rational decision maker to weight the expected benefits and costs of the two options.

On the one hand, revealing an unfair benefit is likely to trigger negative reactions from other agents, such as malicious envy and retorsion measures. People (Range, Horn, Viranyi, & Huber, 2009; Brosnan & de Waal, 2003, but also dogs and monkeys,>) react negatively to unfairness in reward distributions, and they might impose all sorts of penalties to agents who enjoy undeserved benefits (Cohen-Charash, 2009; R. H. Smith & Kim, 2007; van de Ven, Zeelenberg, & Pieters, 2010).

On the other hand, a decision to conceal an unfair benefit comes with the risk of being discovered and perceived as a liar. A reputation as a deceiver can result in a broad range of specific costs, such as intensely negative reactions from others (Wang, Galinsky, & Murnighan, 2009), aggravated third-party punishment (Ohtsubo, Masuda, Watanabe, & Masuchi, 2010), and fewer opportunities to join partners coalitions (Baumard et al., 2013). Another risk, rare but real, is to be targeted for blackmail by unscrupulous agents (Watve, Damle, Ganguly, Kale, & Dahanukar, 2011).

Even from this cursory analysis, it is immediately apparent how difficult it is to optimize in the Conceal or Reveal Dilemma. One will find it difficult to think of all possible outcomes (e.g., blackmail), to translate outcomes in utility points (e.g., missed opportunities to join coalitions), and to assess the probabilities of the various outcomes (e.g., third-party punishment conditional on discovery). These three features are precisely that identified by Bennis et al. (2010) as conducive to another form of decision-making, that is, the use of deontic norms. I now turn to this alternative resolution of the dilemma.

6.2.2 *Deontic norm resolution*

As an alternative to the use of cost-benefit analysis, the Conceal or Reveal Dilemma can be resolved by relying on deontic norms, which only consider the intrinsic acceptability of the two possible actions (conceal, reveal), and do not factor in their consequences. Recent research emphasized the importance of these deontic norms for moral decision making (Haidt, 2007), and especially their use as substitutes to cost-benefit analysis (Baumard et al., 2013; Bennis et al., 2010; Berns et al., 2012; Sunstein, 2005).

Deontic norms can provide a workable alternative to cost-benefit analysis, when it is hard (or plain impossible) to assess the range of potential outcomes, to translate them into utility points, and to assign them each a probability (Bennis et al., 2010). With respect to the Conceal or Reveal Dilemma, a deontic resolution consists of applying a general norm supporting one option or the other, regardless of the consequences of this option.

An important aspect of the Conceal or Reveal Dilemma is that it does not lend itself to the application of any universal (or quasi-universal) deontic norm such as *do not inflict harm.* Different norms can be considered instead, that would either support concealing or support revealing. For example, one deontic reformulation of the Conceal or Reveal Dilemma is *do not boast* vs. *do not lie.* Boasting about one's undeserved rewards would amount to advertising a violation of one of the fundamental moral motives, that of proportionality of merit and reward (Rai & Fiske, 2011). On the other hand, concealing the reward would amount to lying, and there is evidence that a substantial proportion of people prefer not to lie, even if it means they will incur a cost (Gibson, Tanner, & Wagner, in press; Gneezy, 2005).

The fact that concealing and revealing can both be supported by (different) deontic norms is important because it makes it impossible to predict, ex ante, what people are going to do. The deontic norm model makes a critical prediction, though, that distinguishes it from the cost-benefit model: It predicts that whatever people decide to do, they will not change in response to financial incentives. In contrast, if people solve the dilemma by cost-benefit analysis, they should be swayed by experimental manipulations that make it costly or beneficial to conceal or to reveal. In this Chapter, I provide a detailed test of these critical predictions. The study begins with a quick test using an hypothetical job scenario, and then turns to the new paradigm, the Conceal or Reveal Game.

6.2.3 *Job Vignette Illustration*

To provide a first empirical illustration of the Conceal or Reveal Dilemma, an online study using an hypothetical job offer vignette was conducted. Partici-

pants (120 women and 157 men, mean age 28) were recruited on Mechanical Turk and read two scenarios, in random order. One scenario read:

> Imagine that you have been offered a job and that you are having a discussion about your salary. The company negotiators tell you that you are getting *a little more* than coworkers who have equal qualification and greater seniority than you have. *They also tell you that you can get largely more than them, if you agree to hide that arrangement from your coworkers.* What do you think would be your preference?

In this scenario, there is an incitement to conceal the salary advantage (it would be larger if concealed). In the other scenario, the parts in italics read *largely more* and *They also tell you they can hide that arrangement from your coworkers, if you agree to get only a little more than them.* That is, in this other scenario, there was a financial incitement to reveal the salary advantage (it would be larger if revealed). Regardless of the incentive structure, a majority of participants indicated that they would prefer to reveal their salary advantage (59% and 57%, both significantly greater than chance level, $p = .003$ and $p = .02$).

Overall, about 60% of people chose the Reveal option in the hypothetical job vignette (whatever the incentives or counter-incentives to do so). We will see that this proportion might be more significant than it appears at first glance. In the meantime, I report four experiments conducted within the paradigm called the Conceal or Reveal Game.

6.3 THE CONCEAL OR REVEAL GAME

The Conceal or Reveal Game was used in four experiments. In Experiment 3 (run on campus) everything was for real. The other experiments were run online using Mechanical Turk. The game proceeds as follows:

Two players compete in a quiz game for a prize (1 or 2 euros, depending on the experiment). The winner (the player with the greater number of points in the quiz) gets the prize as promised. However, the loser is secretly offered a choice. She is to get a special bonus, whose value depends on whether she decides to conceal or to reveal the bonus. The two options read as follows (minus the Conceal and Reveal headers):

CONCEAL You get c euros and we do not tell it to the other player, so the other player will not know that you earned money while you lost the game. That is, you get c euros and the final result we will show to the other player will be: 'You scored more points than your opponent. Your reward is [amount of the prize], and the reward of your opponent is 0 euros."

REVEAL You get r euros and we tell it to the other player, so the other player will know that you earned money while you lost the game. That is, you get r euros and the final result we will show to the other player will be:

> 'You scored more points than your opponent. Your reward is [amount of the prize], and the reward of your opponent is r euros."

In all the experiments reported here, c and r were greater than the amount of the prize going to the winner in the quiz game. The main variable in all experiments was the difference between r and c, that is, the financial incentive to reveal the bonus. The greater r compared to c, the higher the incentive to reveal; and the smaller r compared to c, the greater the incentive to conceal.

6.4 METHODS

6.4.1 *Experiments 10-11*

The experiments were conducted on the Mechanical Turk platform. Subjects read a narrative describing their hypothetical progression in the Conceal or Reveal Game (people got to answer two trivia questions to illustrate the quiz part of the game). They indicated whether they would choose the Conceal option or the Reveal option, if the game was performed for real. There were 120 participants in Experiment 1 (46 women, mean age 30), and 219 participants in Experiment 2 (96 women, mean age 32). The incentive to reveal ($r - c$) was manipulated between-subject. It was 1, 2, or 3 euros in Experiment 1, and 1 or 5 euros in Experiment 2.

After they made a choice, participants indicated the extent to which they thought the other player would envy their purported payoff, using a 4-item scale adapted from Moran and Schweitzer (2008). This manipulation check allowed to test whether the manipulation of incentive made a subjective difference for the participants; that is, whether participants themselves made a difference in the utility of winning 1, 2, 3, or 5 euros, by attributing more envy to their counterpart as a function of the earned sum.

6.4.2 *Experiment 12*

The experiment was conducted on the campus of the University of Toulouse (France), with 240 participants (94 women, mean age 23). Participants were explicitly told that all financial gains were for real, and that the experimenters might decide to award discretionary bonuses during the game. Participants were paired up to compete in the 8-question trivia quiz. Within each pair, the participant with the lower score (the quiz loser – ties were resolved through a supplementary list of questions) secretly received the Conceal or Reveal offer. The $r - c$ incentive to reveal was manipulated between-subjects, and could be -1, 0, +1, or +8. While the quiz loser was considering the Conceal or Reveal offer, the quiz winner was given a personality questionnaire to fill. This was done in order to keep both players busy, and to

avoid a situation where the quiz loser would be under scrutiny from the quiz winner while making a decision.

Once payments were given, quiz losers indicated the extent to which they thought the quiz winner envied them (same 4-item scale as in Experiments 1 and 2), and quiz winners indicated how much they actually envied the quiz loser (same 4-item scale). This procedure provided further opportunity to check whether the manipulation of incentives made a subjective difference for the participants, both winners and losers.

6.4.3 *Experiment 13*

The experiment was conducted on the Mechanical Turk platform, exactly as in Experiments 1 and 2, except that the $r - c$ incentive was manipulated within-subject. The 330 participants (143 women, mean age 29) made five Conceal or Reveal decisions (in randomized order), with $r - c$ incentives of -8, -1, 0, +1, and +8. To keep the experiment reasonably short, the 4-item envy scale was omitted.

6.5 RESULTS

Table 6.1: Percentage of participants choosing to reveal, in all experiments, as a function of the incentive to reveal (in euros).

Incentive	−8	−1	0	+1	+2	+3	+5	+8
Expt. 1				72	57	62		
Expt. 2				59			51	
Expt. 3		70	60	60				66
Expt. 4	54	58	60	48				53

The manipulation checks showed that the incentive manipulation itself was successful. Figure 6.1 shows that the participants expected others to envy them the more the higher their revealed earnings were. They were correct indeed, as shown by the data of Experiment 3, in which we had an opportunity to measure the actual envy that other players experienced. If anything, participants slightly overestimated the envy they were occasioning to others.

Statistics confirm the visual impression produced by Figure 6.1. Predicted envy was correlated with the earnings of the quiz loser in Study 2 and 3, respectively $r(217) = .19$, and $r(118) = .58$ ($p < .01$, $p < .001$); albeit not in Study 1: $r(118) = .05$ ($p = .55$). Finally, as measured in Study 3, experienced envy was correlated with the earnings of the quiz loser, $r(118) = .48$, $p = .001$, and predicted envy was significantly higher than experienced envy, $t(119)$, $p < .001$, $d = 0.55$.

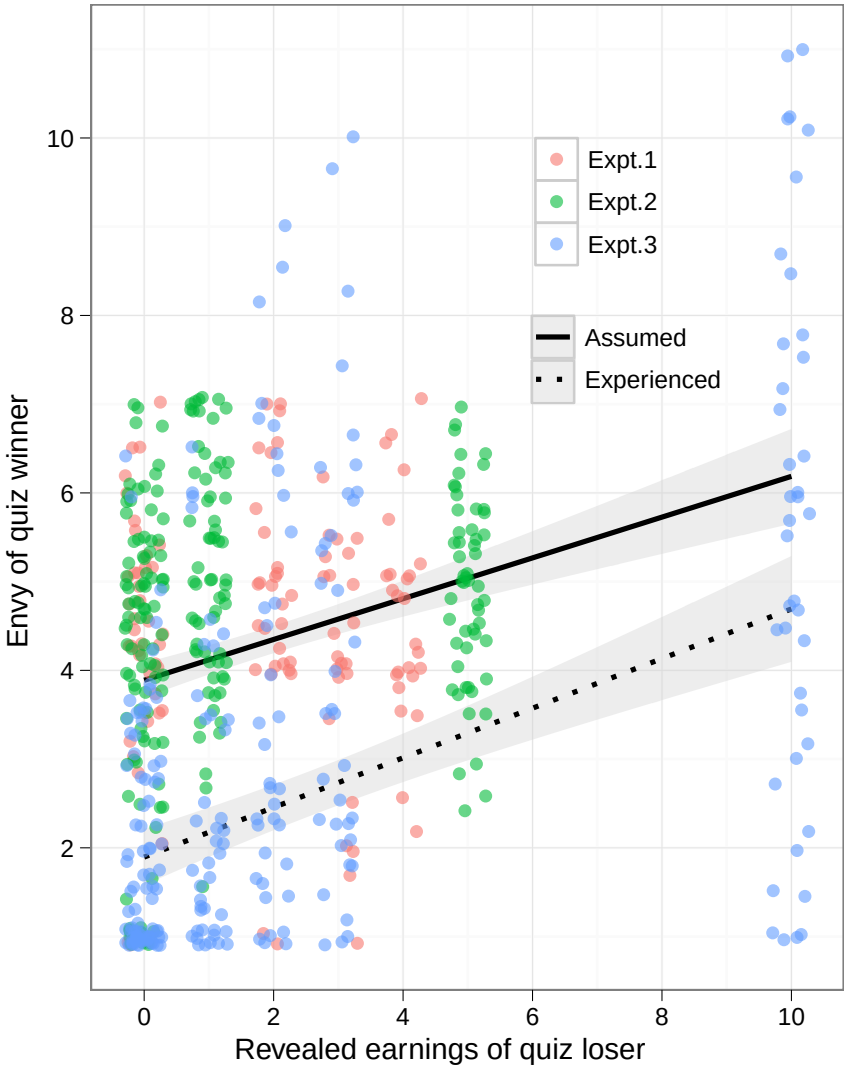


Figure 6.1: Participants (quiz losers) correctly assume others (quiz winners) to envy them all the more than their revealed earnings are higher. They slightly overestimate this experienced envy.

Having shown that we successfully manipulated incentives, we turn to the effect of these incentives to the Conceal or Reveal Decision. Table 6.1 displays the proportion of participants who chose to Reveal, for all levels of incentives across our five experiments. It is immediately apparent that in all but one of our 14 experimental conditions, a majority of participants chose to Reveal (even in the three conditions in which it was costly to do so).

Increased incentives to reveal did not increase the proportion of participants choosing to reveal, in any experiment, and even when the incentives were real. Since outcome was dichotomous, logistic regression models were used for analysis (cf. Table 6.2). Generalized linear models did not detect any effect of incentives in Study 1, Study 2, nor Study 3. Neither did a mixed effects model used to account for fixed effects in Study 4.

In four studies we did not detect a significant effect of incentives on the proportion of participants choosing to reveal. Therefore, it is appropriate to compute the meta-proportion of reveal decisions, across our four studies.

Figure 6.2 offers a visual display of this analysis. Across our four studies (totalling over 800 participants), the proportion of reveal decision is estimated at .58, with a 95%- confidence interval of .54–.62, $p < 0.001$. Further, even a permissive test does not detect any difference between the eight incentive conditions, $\chi^2(7, 1997) = 8.1795, p = .317$.

6.6 DISCUSSION

The experiments put people in an uncomfortable situation, that of making public (or not) that they received unfair benefits. It turned out that about 60% of people preferred to advertise their unfair benefits, whatever the personal incentives or counter-incentives to do so. This insensitivity to incentives is a characteristic sign that a decision is the product of a norm, rather than a cost-benefit analysis. In that respect, a critical feature of the Conceal or Reveal Dilemma is that it does not simply oppose a morally commendable decision to a less commendable one. In particular, people cannot change the fact that their reward is unfair, and have no way to behave altruistically in favour of the other player.[1] The absence of a strong, straightforwardly applicable norm, paves the way for cultural and individual variations in response to the Conceal or Reveal Dilemma.

1 That is, if they stick to the implicit rule of non-transferable utility. In one (and only one) of the 120 pairs of Study 3, did a subject thought of publicly accepting 10 euros, then sharing them with the other player.

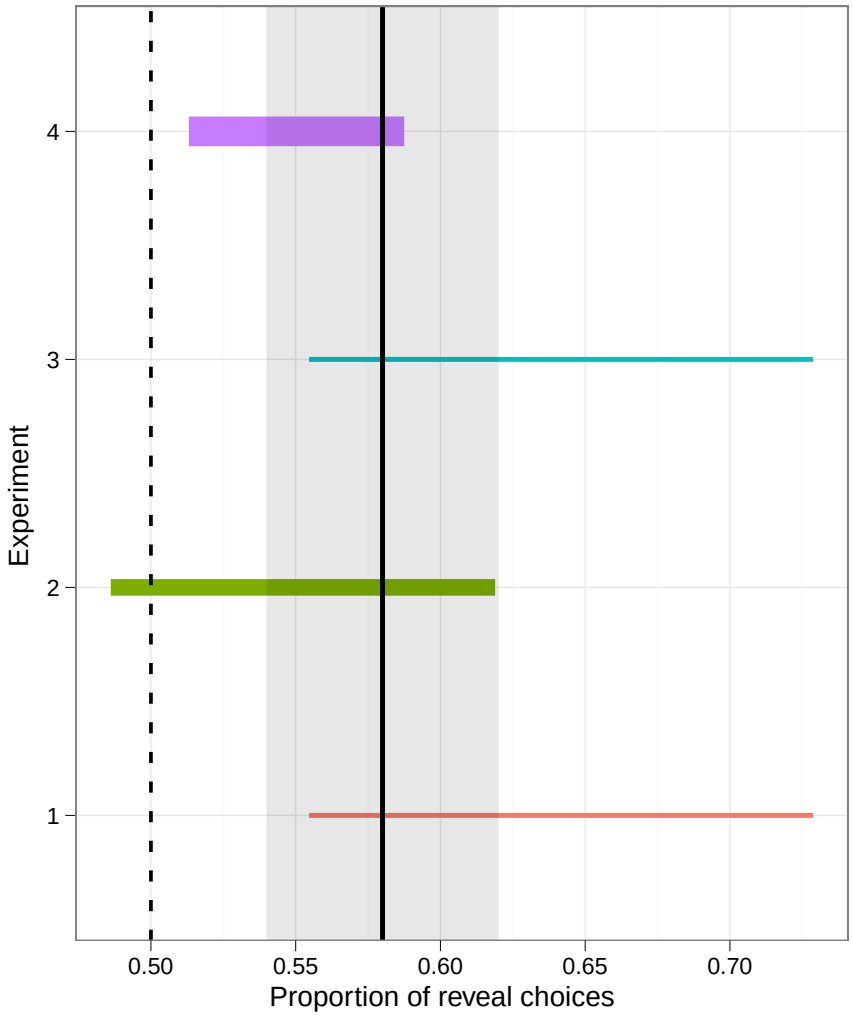


Figure 6.2: Meta proportion analysis of Studies 1-4. Line width is proportional to Study N. Line length shows confidence interval of the proportion of participants deciding to reveal. The vertical dark line displays the meta-proportion across studies, surrounded by its confidence interval in gray.

	Experiment 1	Experiment 2	Experiment 3	Experiment 4
(Intercept)	1.53 (0.77)*	−0.12 (0.68)	0.15 (4.14)	0.53 (0.16)
-8				−0.27 (0.18)
0			−0.47 (0.55)	0.10 (0.19)
+1			−0.46 (0.55)	−0.60 (0.18)
+2	−0.66 (0.48)			
+3	−0.47 (0.50)			
+5		−0.32 (0.41)		
+8			−0.21 (0.57)	−0.30 (0.18)
Quiz score			0.06 (0.13)	
Age	−0.01 (0.02)	0.02 (0.02)	0.00 (0.05)	−0.00 (0.02)
Male	−0.49 (0.40)	−0.52 (0.44)	0.17 (0.41)	−0.32 (0.39)
AIC	162.49	140.62	169.09	2024.13
BIC	176.43	150.96	188.60	2056.58
Log Likelihood	−76.25	−66.31	−77.54	−1006.07
Deviance	152.49	132.62	155.09	2012.13
Num. obs.	120	98	120	1650
Num. groups: ID				330
Variance: ID.(Intercept)				2.91

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table 6.2: **Parameter estimates of logistic regression models for Experiment 1, 2, 3, and a linear mixed model for Experiment 4.**

6.6.1 *Cultural variations*

The norms that people can apply in the Conceal or Reveal Dilemma do not appear to be strong and universal (and different people might even apply different norms for the same final decision). The cultural prevalence of different norms could accordingly lead to cultural differences in response to the Conceal or Reveal Dilemma.

For example, it seems possible that a norm of modesty might encourage the decision to conceal, given that modesty personality scales often include items related to the avoidance of attention-seeking (Chen, Bond, Chan, Tang, & Buchtel, 2009), phrased for example as *I don't call attention to myself* or *I dislike being the center of attention* (see the Modesty/Humility scales of the Values in Action, NEO Personality Inventory, and HEXACO Personality Inventory, all available from `ipip.ori.org`). Interestingly for the current purpose, there are known cultural variations in the importance of the modesty norm. For example, the modesty norm is substantially stronger in some collectivist cultures (Kurman, 2001, 2004), and the effects of this cultural stricture can be detected early on. For example, Cameron, Lau, Fu, and Lee (2012) showed that Chinese children judged modest lies more positively and boastful truths less positively than Euro-Canadian children, a cultural difference which was shown to increase with age.

It is thus quite possible that cultural differences in the strength of the modesty norm might translate in differences in the frequency of concealing decisions in the Conceal or Reveal dilemma. Other cultural differences, for example in the likelihood of self-disclosure, might have an impact as well on Conceal or Reveal decisions: it will be an important task in the future to map cultural differences in relevant norms onto behavioural differences in the Conceal or Reveal Dilemma.

6.6.2 *Individual variations*

Whatever the (counter-)incentives, about 60% of people in the experiments decided to reveal their benefits. There are two possible interpretations of this finding, that speak directly to current debates in moral-economic decision making research. In a nutshell, either people follow a strict norm when they face the Dilemma (and for 60% of them, the rule is to Reveal), or people randomly make a decision every time they face the dilemma, with 60-40 odds in favour of Revealing. In other words, either the Conceal and Reveal Game elicits a mixed population, or it elicits a mixed strategy.

Recent research on cheating would speak for the mixed strategy hypothesis (Ariely, 2012). The frequency of cheating seems to be stable whatever the incentives to cheat, but this stability is not due to some people being systematic cheaters and others being systematically honest. Rather, it reflects the

fact that everybody cheats a little. The stable frequency of cheating seems to reflect a mixed strategy, rather than a mixed population. The bulk of the literature on moral-economic decision making would nevertheless favor the mixed populations hypothesis. The first and foremost framework for explaining insensitivity to incentives in moral-economic decision making is that of *sacred* or *protected* values (Baron & Spranca, 1997; A. P. Fiske & Tetlock, 1997; Ritov & Baron, 1999; Tetlock, 2003). These values correspond to core elements of one' identity (be them religious, ethnic or otherwise), and their characteristic feature is to resist tradeoffs. Typically, one will refuse to transgress a sacred value for money, and will even get upset if asked for one's price. One could tentatively interpret incentive-insensitivity in the Conceal or Reveal Game as the sign that sacred values are at work, and thus that the 60-40 split reflects a mixed population. It is slightly odd, though, to think that concealing one's unfair benefits could be a sacred value for 40% of the population.

There is another framework that would speak for the mixed population hypothesis, without appealing to sacred values. In the mutualistic model of morality (Baumard et al., 2013), decisions are made to optimize one's future participation in profitable coalitions, by means of establishing a reputation as a decent partner. Baumard and colleagues argue that this optimization is more likely to be reached by agents who evolved genuine moral preferences, than by agents who evolved to compute the expected costs and benefits of each moral decision. This evolutionary model would predict again that the 60-40 split reflects the evolution of a mixed-population equilibrium in the Conceal or Reveal Game. A natural direction for future research, in order to arbitrate between the mixed-population and mixed-strategy accounts, would be to develop evolutionary game-theoretic models of the Conceal and Reveal Game (Axelrod, 1986, that would include, e.g., third-party punishment and meta-punishment;), and to check the conditions under which the equilibrium supports mixed populations or mixed strategies.

From an experimental perspective, though, the data already point in one direction. Experiment 4 followed a within-subject design, in which participants made a series of five decisions, under various levels of incentives. The data suggest that people adopted one strategy and stuck to it for all levels of incentives. About 38% of people made the same choice in all five situations, and 65% made the same choice in four situations out of five. While these data are only suggestive, they should orient future research towards the possibility that people have evolved *genuine* but *different* moral preferences about what to do in the uncomfortable situation of having been granted unfair benefits.

Part III

GENERAL CONCLUSION

7

BROADER THEORETICAL IMPLICATIONS

When CSR theories are considered (cf. Appendices 9.1) the question of moral standards comes up consistently. Whereas CSP theory calls companies to follow public policy makers, and people's views in order to gain competitive advantage in the long run, ST goes even further and holds companies liable towards the stakeholder (an extended version of the shareholder) who is defined by the interest he has in regards to the actions of companies. CC theory aims at institutionalizing spontaneous socially responsible practices by business leaders by granting citizenship (a concept granted to individual people) to organizations. Citizenship comes with duties that are defined by international standards (e.g. UN Principles) but it is unclear whether they should be enforced by governments or rest moral obligations. SV theory merely requires companies to comply with the fiduciary duties towards shareholders.

Legitimization of CSR theories is mainly based on philosophical considerations. ST, refers to Immanuel Kant's imperative of respect for persons. It is basically stating that people should treat others as ends in themselves as opposed to means. Treating people as means implies their permission to do so. For business ethics this is interpreted in saying that companies should treat stakeholders as ends.

Another example is CC theory, which strongly relies on Aristotelian conceptions of citizenship supposed to evoke individual duties and rights within a political community (Sison, 2011). However, people's behaviour in the markets often is far from virtues like temperance, generosity and sociability, but closer to envy and diligence (Graafland, 2009).

Reading through the CSR literature one feels the need for setting standards. Setting standards could put business ethics in a more comfortable position when arguing. Unfortunately moral standards are by definition subject to criticism. Since morals arise from conflicting views on how one should behave a moral standard cannot be acceptable to everyone for then it would be no longer a response to a moral issue.

With this limitation in mind, the empirical results from Part ii can be interpreted from a business ethics perspective. They provide insight into peoples' views, judgements and decisions in situations that are controversial. There-

fore they may only provide standards in the sense that a view or behaviour is predominant amongst the studied population.

7.1 EFFECTS OF SOCIALLY RESPONSIBLE INVESTMENTS ON TRUST

The study in Chapter 4 has shown that CSR in the form of SRI can be a mediator of trust in investment funds. Precisely the mediating effect of SRI is due to the similarity in values that mutual funds can have with the particular personal values of people. Trust only increases if the values of the funds are similar to those personal values. The global effect of values commonly used in SRI (ESG) is amplified by similar personal values.

The economic virtues of trust as a social capital are well documented. For example, trust is stronger in nations with higher and more equal incomes, with institutions that restrain predatory actions of chief executives, and with better - educated and populations (Knack & Keefer, 1997). Derwall (2007) also argues in favour of economic virtues of CSR and SRI. Results from Chapter 4 are in favour of the hypothesis that there is a link between these two phenomena. Strictly speaking they provide a supplementary condition: SRI can have a positive effect on economic performance because of increased trust, but only if the values promoted by SRI mutual funds are similar to the personal values of investors.

CSPT argues that companies will loose their power if they do not take the responsibility that comes with it. Referring to results from Chapter 4 one can speculate that this claim could to some extent be grounded in diminishing economic performance as a result of vanishing trust.

In relation to financial performance people do not readily trade ESG values for performance. Poor performing funds could catch up with the good performers, but the highest trust scores were always obtained by the *primus inter pares*.

This retention towards 1:1 trade offs could be related to the issue of greenwashing. Greenwashing is a practice by which a company benefits from social responsibility without incurring the cost (Laufer, 2003). In other words, people could refrain from accepting trade offs by fearing to be taken in by dishonest mutual funds. This speculation is supported by the fact that participants's trust did not increase when funds were merely labelled as ethical.

7.1.1 *Identification based trust*

Conceptually, results of Chapter 4 may refer to identification based trust. Identification based trust arises from empathy with the other party's desires and intentions and as a result of sharing a common identity and similar personal values (Spielberger, 2004).

This form of trust arises when trustor and trustee hold similar personal values, including a shared concept of moral obligation. Identification based trust trust develops through empathy because the parties effectively understand and appreciate each other's wants. Ultimately this mutual understanding is developed to the point where each party can effectively act for the other.

In the setting of mutual fund investments this might sound odd, but ultimately identification based trust develops as both parties know and predict each other's needs, choices, and preferences and also share some of those. This increased identification enables both parties to empathize strongly with each other and incorporate parts of the other party into their own identity as collective identity.

In other words people will entrust their savings in mutual funds because those funds hold similar personal values, share common interests and because they can predict the needs of their clients. SRI funds have made the right choice to focus on moral values. This will be more effective when those values are similar to peoples' personal values. Nevertheless people probably require more to trust.

If trust must be built from scratch, making agreements and monitoring compliance can help to build trust. Only in mature relationships, trust may be so solid, and the risks involved may be so small, that monitoring is not needed to maintain cooperation.

So what CSR standard could apply to SRI? Probably that of a scrupulous merchant. People entrust their savings to funds when they seek higher return as they can expect from treasuries and the fund that they trust to generate this is obviously someone with integrity and with a long term perspective similar to their own. One interesting idea that could be explored in further studies is that people use the ESG values as proxies for this kind of person/institution.

7.1.2 *Belief in progress*

A deeper psychological explanation of the positive effects of moral value attributes of mutual funds could be belief in progress. Belief in progress is a concept from terror management and evolves around the idea that the belief that society will improve and advance in the future can attenuate existential angst (Rutjens, van der Pligt, & van Harreveld, 2009). Precisely, to resolve existential angst, people need to feel they will persist in a symbolic manner even after their death. In other words, they like to believe their contributions will last indefinitely and that their life is meaningful. In order to satisfy this need, people need to assume that society is improving, since otherwise, all their efforts become immaterial and insignificant.

One can also see SRI as progress. Since SRI is concerned with long term extra-financial value creation, SRI investors pursue long term improvement of the society. This, however, is not a philanthropic action but complementary to the pursuit of financial well being. Conventional investment strategies may invest in financially profitable companies that engage in anti-social practices that are not captured by legislation. Therefore, adopting additional investment techniques to prevent investments in such companies is a social progress for investors who believe that individual action can make a difference.

7.1.3 *Support of future generations*

Another explanation, that also comes from existential angst, could be support of future generations. The argument is that to overcome existential angst, people may show altruist behavior that supports future generations (such as investing in SRI funds). These behaviours may enable people to feel their legacy is lasting. Similarly, these behaviours ensure that people feel connected to some enduring pursuit or endeavour.

For example, in a study by Wade-Benzoni, Tost, Hernandez, and Larrick (2012), participants had to imagine that they were an executive, whose company was granted access to some energy source. They had to decide whether their organization should utilize all these resources. Alternatively, depending on the condition, they could allocate some of these resources to another company now, to another company in the future, or to their own company in the future. All these alternatives offered a benefit: These organizations could utilize the resources more efficiently. Mortality salience increased the likelihood that participants would allot resources to another company in the future but not to another company now or to their own company in the future. Perhaps, allotting resources to another company in the future was perceived as a more enduring legacy, diminishing existential angst.

7.2 SOCIALLY RESPONSIBLE REMUNERATIONS

The main lesson to learn form Chapter 5 is that remunerations that are acceptable to the wide sphere of society do exist. When all workers receive a small share of the companies profits, the attribution procedure is clear and an extra bonus compensates people who had bad luck (illness, accidents, etc.) the remuneration is acceptable, no matter if it is executive bonus, or the overall remuneration plan of a company.

This result may be smiled upon and deemed unrealistic by the pragmatic business person. But even if the application may seem Utopian, the justice principles underlying the acceptability judgements of the participants have

driven human thought for decades. It would be irresponsible not to consider these psychological drivers when thinking about CSR and compensations.

The central finding that people are most sensitive to the extent of distribution of remunerations has to be considered in the light of equity models. Hofmans (2012) have studied the distribution principle and different equity models people use. Further they tested whether individual differences in equity models relate to individual differences in equity sensitivity. Similarly to the results from Chapter 5 one equity model is in essence a non-integrative model and another one compares the relative share of a persons outputs and incomes to referent others. In particular the first one (where people do not use the performance information to decide on the distribution of the money) could be ideologically related to the "Always Acceptable" group.

Another interesting implication of unfairly distributed remunerations is the link between income inequality and trust. Oishi, Kesebir, and Diener (2011) showed that inequality in income tends to impede trust (this distrust also impairs happiness). Other studies also indicate that equality can improve trust and cooperation. In a study by (Cozzolino, 2011) one question measured the extent to which participants felt that income varies too dramatically in their community, reflecting whether people thought their society was unequal. Further measures assessed facets of trust, cooperation, social capital, peoples engagement in the political process and whether participants often volunteer in health, education, environment, or other domains. The perception that society is unequal was negatively associated with all these measures.

All these findings imply that equality enhances trust and cooperation on the scale of a society. In societies that are unequal, people with a small income are likely to experience negative emotions that tend to trigger distrust. Also, in these societies, people with an exorbitant income are aware that society is not fair, and this makes them grow suspicious of other people.

A possibility would be that in a context where equality of distributions is granted, the effects of value similarity are reinforced. This abstract idea, combining the research from Chapters 4 and 5 could be implemented in further research. For example an experimental design could test whether a fair distribution (for example following the averaging model of equity) of a companies profits can moderate the effect of the values a company promotes, on trust in the company.

7.3 THE CONCEAL REVEAL DILEMMA

The finding that people are insensitive to financial incentives when they decide to reveal undeserved benefits, confirms the *individual principle* claimed by CSP (cf. Section 9.1.1. According to Wood (1991a), this principle implies that managers, because they exercise discretion, are personally responsible

for exercising it and cannot avoid this responsibility through reference to rules, policies and procedures. The findings presented in Chapter 6 show that people do have other than fiduciary values and exercise discretion not only maximizing their payoffs.

7.3.1 *Self Concealment*

Findings of insensitivity to financial incentives reported in Chapter 6 could be related to research on self concealment. Indeed some people often conceal adverse information about themselves, such as errors or diseases. It would be interesting to find out whether there is a relation between self concealment and behavior in the conceal game.

This tendency to self conceal negative information about oneself is strongly related to limited self disclosure (Uysal, Lin, & Knee, 2010) and positively related to anxiety and depression and loneliness (Cramer & Lake, 1998). In the light of these relations it can be a wild speculation that there could be a clinical component to the concealment of financial advantages.

7.3.2 *Approach and avoidance motivation*

Another way to think of the conceal-reveal dilemma is the distinction between approach and avoidance motivation. Simply put organisms have evolved to approach pleasure and to avoid pain. These motivations are referred to as approach and avoidance motivation and are both considered vital for survival (Elliot & Covington, 2001).

This approach has been applied to explain a variety of interesting phenomena. For example, people who attempt to highlight their qualities, rather than conceal their deficiencies, during social interactions are more satisfied with the conversation (Strachman & Gable, 2006, eg.). Similarly people could derive unpleasant feelings (R. H. Smith & Kim, 2007, eg. envy) from revealing.

Also, most studies compare the consequences of an approach or avoidance motivation. Fewer studies have explored the consequences that unfold when both an approach and avoidance motivation are primed simultaneously. As in the conceal-reveal dilemma it could be investigated if concurrent priming or inhibition of both of these motivations makes people feel uncertain in the reveal game.

There also seems to be an interaction of approach and avoidance motivation and economic cycles. It has been observed that in times of economic contraction, an avoidance orientation is more salient since people seek to prevent losses. On the contrary, during times of economic expansion, an

approach orientation is more salient, since people seek gain rather than to avoid problems.

This was illustrated in a study by Millet, Lamey, and Van den Bergh (2012). Participants imagined hearing a news bulletin that stressed the prediction that the recent economic contraction will last over the coming years. Another group of participants imagined they were hearing a news bulletin that stressed the prediction that the economy would soon expand. In the following phase of the experiment both groups were asked to indicate the degree to which they feel emotions related to avoidance avoidance (eg. fear), and emotions related to approach (ie. curiosity, interest, and eagerness). Results showed that imagining economic contraction increased feelings of fear whereas imagining economic growth evoked feelings of curiosity. A second experiment found that images of contraction, but not images of growth, decreased peoples' willingness to gamble.

The parallel with the reveal game is that people could change their behaviour during economic cycles. One hypothesis is that people abandon their motivation to avoid adverse feelings during economic expansion, which could translate into increased revealing because people no longer avoid adverse feelings. In a second step eventual financial rewards could trigger a virtuous feedback loop for the one who reveals. At the same time repeated revealing could result in stepwise increase of adverse feelings. These two simultaneous processes could eventually repeat until a culminating point where expression of the adverse feelings outpaces the reasons for revealing.

8

PRACTICAL IMPLICATIONS

The findings Presented in Chapter 4, Chapter 5 and Chapter 6 provide valuable insights and recommendations in several applied areas. More systematically, one may distinguish the following major domains:

(a) Behavioural economics and finance (e.g., investment and savings decisions);

(b) Business, administration, and management (e.g., employment, organizational, and product decisions; strategic planning with scenarios; communication of decisions; distributed decision making; cultural differences in decision making);

(c) Marketing and consumer behaviour (e.g., product advertising, labelling, and pricing decisions);

(d) Justice issues (e.g., business ethics; conflicts between self-interest and the other);

8.1 VALUE SIMILARITY AND TRUST IN MUTUAL FUNDS

The practical implication of the findings presented in Chapter 4 are to be found primarily in marketing and consumer behaviour. Marketing pertains to the process that requires developing, pricing, placing, and promoting goods, ideas, or services in order to facilitate exchanges between customers and sellers to satisfy the needs and wants of consumers (Truell, 2007).

Thus, at the very center of the marketing process is satisfying the needs and wants of customers. Consumers buy products that will best meet their needs, as well as provide the most fulfillment resulting from the exchange process. In order to meet customers need marketing managers use three basic market-coverage strategies: undifferentiated, differentiated, and concentrated.

An undifferentiated marketing strategy occurs when a firm focuses on the common needs of consumers rather than their different needs. When using this strategy, fund retailers would use funds designed to appeal to the largest number of potential buyers. For example a mutual fund would

choose companies that are above average in all areas of CSR. Our results suggest that this strategy as limited success. Indeed it is not the case that trust is generally increased by adding moral values to the investment decision process, but it is crucial instead that the values are highly similar to the personal values of the investor for the effect to reach its full potential.

Ultimately it would be necessary to compare the benefits of increased trustworthiness through individually tailored funds against the cost-effectiveness of an undifferentiated strategy (a narrow product focus results in lower production, inventory, and transportation costs).

A company using a differentiated strategy makes a conscious decision to divide and target several different market segments, with a different product geared to each segment. This would be the case of a retailer that promotes themed funds. Themed funds invest exclusively in securities representing a single thing. Whereas this generally refers to themes like real estate, government bonds, commodities or emerging markets, it may also concern single moral topics. Examples would be religious funds (eg. Ave Maria Mutual Funds, Shariah BeES, UNB Al Samaha Islamic), funds who screen for environment issues and animal welfare only (Rocky Mountain Humane Investing, Cruelty-Free Value Fund, The Humane Equity Fund) or funds who screen for social issues (Domini Social Equity, Parnassus Workplace Fund).

The findings of Chapter 4 suggest that retailers who can offer themed funds that appeal to the personal values of each client would have an advantage over retailers with few ESG funds above average in all categories. Of course a different marketing plan is needed for each segment in order to maximize the fund subscriptions and this comes with an extra cost. Furthermore, the opportunity cost of emitting the themed funds for medium sized institutions who usually promote in-house funds, might be too expensive.

The last strategy is known as the concentrated marketing strategy. The concentrated strategy aims at serving a large share of a single market. Typically it is used by companies with limited resources. This strategy would be used by a financial institution entirely devoted to social responsibility. The marketing process of SRI mutual funds would be embedded in a holistic approach to alternative banking. There are only few international examples of such institutions (Triodos bank), but more can be found on a national level (eg. GLS in Germany, Fiare in Spain or Unity trust Bank in the UK).

Heterogeneity analysis has shown that value oriented clients also have increased investor loyalty towards their banks (Bauer & Smeets, 2011). Thus the concentrated approach allows banks to obtain a much stronger position in the segments it targets because of the greater emphasis on the targeted personal values. It also has been argued that this greater emphasis ultimately leads to a better understanding of the needs of the targeted clients.

A promising perspective could also be to inquire about the other party in the marketing process - namely the retail banker. Indeed recent polls document that CSR could be a lever for employee attraction and engagement (Meister,

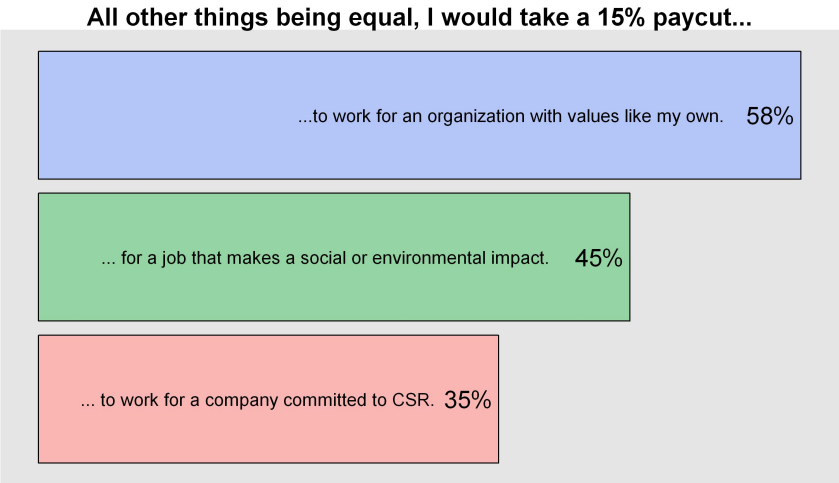


Figure 8.1: Results from a 2013 poll by the nonprofit Net Impact - value similarity increases acceptance of remuneration cuts more than general CSR commitment.

2013). Whereas, all else being equal, only 35% of respondents would take a remuneration cut to work for a company committed to CSR, 58% said that they would do so to "work for an organization with values like my own" (Meister, 2013) (cf. Figure 8.1) The need to make an impact seems to be even stronger for younger generations. Since so much of the corporate world has now jumped on the CSR bandwagon, it can be hard for companies to set themselves apart - increased value similarity could be a lever for making the difference.

8.2 THE ACCEPTABILITY OF REMUNERATIONS

Applications of the findings on acceptability of remunerations are in business administration and justice issues. Beforehand it is important to say that they do not provide an answer to the question whether the state or private sector should be in charge of making remuneration systems more acceptable to the public. Hence, it could be the starting point for an interesting psychological-political research project.

Many political thinkers, from John Stuart Mill to *Third Way* social-democrats have argued in favour of a market economy, with government having some responsibility for guaranteeing social justice. From such perspectives policy measures for increasingly acceptable remunerations could be envisioned. Indeed, many employee benefits are already legally required. For example, employers must provide workers remuneration insurance and social security must be paid partly by the employer. Those benefits, especially in the case of layworker's benefits, could be extended.

On the other hand there are company specific remuneration aspects that are more difficult to legislate but which contribute to the good functioning of organizations and society. For example, a bakery would be more likely to give employees free bread, while a restaurant would offer employees free or reduced-price meals. Whereas those company specific remunerations are more costly to large companies, they can have access to different employee advantages through grouped purchases.

Another application is that efforts towards distributive justice of remuneration policy could be implemented by human resource managers into job satisfaction agendas. These agendas typically include a variety of measures. According to Brief (1999) "if a person's work is interesting, the remuneration is fair, the promotional opportunities, and the supervisor is supportive, and the coworkers are friendly, then employees will be satisfied." Of course, the impact of the findings from Chapter 5 on remuneration fairness perception and job satisfaction must be considered in the context of these other factors.

8.3 REVEALING UNDESERVED BENEFITS

Chapter 6 reported evidence that people are insensitive to financial incentives when they decide to reveal or conceal benefits that would seem unfair to others. This knowledge could become useful in many situations - think for example of bribery, tax evasion or welfare fraud. In all those situations the financial incentives may play a smaller role once the person has received the benefits.

A more indirect application could be in privacy regulation theory. Privacy regulation refers to the ways in which people and groups control interactions with others, especially about confidential or intimate information (Spielberger, 2004). All cultures have developed mechanisms for regulating privacy that generally evolve around "selective control" of the levels of openness and closedness a person seeks.

Due to its importance for effective functioning, privacy regulation is deemed a "cultural universal" - every society has developed mechanisms that allow people to regulate interactions with others. However, specific privacy mechanisms are culture dependent, and use of privacy regulation mechanisms is usually guided by cultural norms. Insensitivity to incentives for revealing benefits that would be perceived as unfair shows that privacy regulation mechanisms do not merely rely on cost benefit analysis. As suggested earlier (cf. Chapter 6) decisions in the reveal game could as well be influenced by cultural norms. Amongst the many applications of privacy regulation are privacy policies in hospitals, in companies, on web sites and security screening.

8.4 CONCLUDING REMARK

Throughout the course of my work for this dissertation I have continuously encountered the phenomenon that for some reason economic issues seem to be perceived as irreductibly inconsistent with a moral position. It is curious to see that CSR theories range form economically motivated to normative approaches as if both together were inconceivable. Empirical studies document a change in causal attribution when a desirable behaviour is or is not financially rewarded (Bénabou & Tirole, 2010) as if doing good while earning money was impossible. In my own studies, notably in the last one on undeserved benefits (cf. Chapter 6), participants sometimes unexpectedly refused to get paid saying they were willing to help science but not in exchange for money as if it was impossible to do both at the same time. I found that some of my colleagues were very uncomfortable with calculus based financial arguments, others were unable to consider the limits of calculus (On a few occasions I had the impression that not choosing the financially optimal solution was considered to be an emotional or intellectual weakness).

My impression is that dialectical reasoning in moral economics is handicapped by deeply held convictions about the status of financial success. Many consider rich people to be profiteers whose sole motivation and purpose in life is earning more money with no consideration for the well being of others. Many also consider that financial misfortune is a matter of personal motivation and that people on welfare are the buccaneers of modern states.

Dialectic reasoning requires mental flexibility which is particularly hindered when those convictions are paired with emotions. The stronger the link between negative emotions and the belief in profiteers or modern buccaneers the less will someone be able to embrace the opposite view. Not that both beliefs are wrong, they are accurate descriptions of realities but just not for every situation. Motility is required in responsible judgement, and improvement of it is where research on morals and economics should ultimately take us.

Part IV

APPENDIX

9

CORPORATE SOCIAL RESPONSIBILITY: DEFINITION AND THEORY

When companies act in the interest of the society one generally speaks of CSR. However there are a variety of formal definitions for the term CSR. While it is generally accepted that CSR means responsible business conduct in the actual economic activity, in environmentally relevant aspects, in relations with employees and in exchanges with stakeholders, discordance on a precise definition persists.

The Oxford Handbook of CSR references 25 different ways CSR has been defined in the academic literature (Crane, 2008). Further, in the Anglo-American usage, and increasingly in the western European countries, related concepts such as corporate responsibility or CC are used in the discussion about the role and responsibilities of companies in society (Dubielzig & Schaltegger, 2005). A general problem seems to be the difficulty to pin down the key points that constitute it.

For example European Commission mentions social and environmental concerns as the two key aspects of CSR. If economic concerns are added we obtain the three dimensions of sustainability mentioned by D. Brown, Dillard, and Marshall (2006). Crane (2008) includes all dimensions of sustainability and integrates voluntary social, environmental and economic contributions of a company that go beyond regulatory compliance. Thus an important challenge is to clearly distinguish between what are the aspects that constitute CSR and what are not.

Another question that has challenged many scholars is to justify why companies should engage in CSR practices. There are basically two approaches: the normative and the economically motivated approach. The normative approach claims that the company draws on non-monetary benefits from society, such as infrastructure, security, educational and social systems. In return, the society expects social responsibility from the company. The normative approach justifies regulatory pressure from governments and transnational institutions, that require social responsibility from companies (Wühle, 2007).

In line with the normative approach, the International Organization for Standardization, has launched an International Standard providing guide-

lines for social responsibility (SR) named ISO 26000 "Guidance on Social Responsibility" in 2010. This non-certifiable standard is a guide to raise awareness of social responsibility and promote a common terminology. It uses already existing approaches to environmental and social responsibility (for example the Global Reporting Initiative) and contains many examples of CSR best practices.

The economically motivated approach, on the other hand, tries to establish an intrinsic motivation of companies for the implementation of CSR. It seeks to demonstrate that a voluntary, non-normative implementation of CSR is a benefit increase for the company itself. The reason given for this increase in benefits is the creation and valuation of intangible assets, such as trust, reputation, employee motivation and customer satisfaction (Wühle, 2007). Accordingly many scholars have argued for the *business case* of CSR (Carroll & Shabana, 2010; Weber, 2008; Salzmann, Ionescu-somers, & Steger, 2005).

People who believe in economically motivated approaches would thus promote SRI through the financial out-performance argument. The basic idea is that SRI gain an advantage though pricing in intangible externalities. For example they would not invest in a company with a bad reputation when it comes to child labor practices before there are scandals followed by outraged consumers and new legislation. Those who favor a normative approach, on the other hand, would favor communicating the moral standards that SRI could provide.

As for socially responsible remunerations and honesty in affairs, both can either be justified through normative or economic approaches. A normative approach would justify them with increased moral standards, whereas an economically motivated approach would point towards increased company performance. It could be argued that it is ethically superior and desirable for a democratic society to design remunerations in a way that is most acceptable to the general public. Honesty in business is most likely to be encouraged for the sake of transparency in organizations.

Economically motivated approaches would could argue that there is a causal link between turnover, employee satisfaction and perceived fairness of remunerations: If workers of a firm think that their own remuneration, and the remuneration of the other employees of the firm is fair, they will be more satisfied and more productive in their work. Ultimately, this increase will benefit the companies turnover.

It has to be acknowledged that the economically motivated approach is somehow limited to calculus. If payroll becomes higher or incentives for honesty more expensive than the gain in employee motivation through fairer salaries or the decrease of hidden costs engendered by undeserved benefits, there simply is no economic reason for continuing the policies.

An important reason for economically motivated CSR makes use of CSR as a promotional measure. The goal is to present the company as morally su-

perior and thus gain a competitive advantage over less moral peers. The results of the studies presented in Part ii could be used to communicate moral superiority in and effective manner. However it can only be seen as legitimate if the actual CSR performance is in line with the communication. Exaggerations, half-truths or individual aspects promoted independently of the larger unsustainable core business, are called green-washing. Consumers have been shown to reject green-washing practices leading to a backslash for companies reputation (Stokes, 2009; Sirieix et al., 2012).

In sum, there is broad agreement about the fact that CSR means doing good to the society, but controversy persists about the precise actions that companies can do to do good to the society and foremost about their motivations to do so.

9.1 THEORIES OF CORPORATE SOCIAL RESPONSIBILITY

There have been many attempts do classify CSR theories, among which three can be pointed out. Klonoski (1991) identifies three kinds of theories. The first group is called 'fundamentalism'. It includes all positions that, in one way or another assert that companies are simply legal artifacts ant their only social responsibility is increasing profits in compliance with national and international laws. The second group of theories consists of the theories that claim a moral person-hood of companies and point to their moral agencies. As a consequence, companies can be held morally responsible for their actions. The third group of theories considers the social dimension of the company to be particularly relevant.

Windsor (2006) also considers three key approaches to CSR. First, ethical responsibility theory, which presents strong corporate self restraint and altruistic duties and expansive public policy to strengthen stakeholders' rights. Second economic responsibility theory, which advocates that wealth creation is only subject to minimalist public policy and eventually customary business ethics. Third, CC theories which invoke a political metaphor that provides no true intermediate positioning. In other words, either of the two conflicting interpretations abandons responsibility language. Neither an instrumental interpretation emphasizing managerial discretion to manipulate philanthropy strategically nor an idealized interpretation substituting voluntarism arguments for moral duties provides a theoretical synthesis of economics and morals.

A third study by Garriga and Melé (2004) distinguishes four groups of CSR theories, by considering their respective focus on four different aspects of the social reality: economics, politics, social integration and morals. The group of theories that focuses on economics considers the companies as a mere vehicle for wealth creation. The second group, which focuses on the social power of companies and their responsibility in the political domain associated with this power. The third group focuses on social integration and

includes all theories which assert that companies ought to integrate social demands. The fourth group of theories focuses on moral and comprises all theories that consider the relationship between business and society should be embedded with moral values. The following sections build on these distinction and provide a detailed account for the four most prevalent theories in CSR.

9.1.1 *Corporate Social Performance Theory*

CSP theory is grounded in sociology and fits best in the moral personhood category of Klonoski (1991). CSP is understood as the configuration in the business organization of principles of social responsibility, processes of response to social requirements, and policies, programs and tangible results that reflect the company's relations society (Wood, 1991a). This theory claims that business, apart from wealth creation, also has responsibilities for social problems created by business or by other causes, beyond its economic and legal responsibilities. This includes moral requirements and discretionary or philanthropic actions carried out by business in favor of society. That is, improving CSR performance 'means altering corporate behavior to produce less harm and more beneficial outcomes for society and their people (Wood, 1991b).

Conceptually Wood (1991a) presented a synthetic model which is probably most representative of CSP Theory. It includes:

1. Principles of CSR, expressed on three levels: institutional, organizational, and individual
2. Processes of corporate social responsiveness
3. Outcomes of corporate behavior

The 'institutional principle', sometimes mentioned as 'principle of legitimacy' goes back to Davis (1973). Davis arguments are based on morals (human values and responsibility), social legitimacy (everything that is considered responsible by society), and a vision of business that pragmatically considers the consequences of irresponsible use of a company's power. This approach emphasizes first of all that responsibility is always paired with power, and the power of companies always has a social impact (Davis, 1960). Hence, companies are required to assume the resulting responsibilities. However the factors that influence on the social power of a company are not exclusively internal but also external and shift between the economic, the social and the political domain. Since companies need social acceptance, the continued 'vigor of business depends upon its forthright acceptance of further social-human responsibilities' (Davis, 1960).

From this he derived a 'power-responsibility' equation which is formulated as follows: 'social responsibility of businessmen arises from the amount of

social power they have' (Davis, 1968). He further stated that those who do not take responsibility for their power, will ultimately loose it (Davis & Blomstrom, 1966). Applied to business these ideas mean that society grants legitimacy to companies and that in the long run those companies who do not use their power in a way that is considered responsible by society will loose it (Davis, 1973).

The principle that power comes with responsibility is found in the situation remunerations introduced in Section 3. As demonstrated by the historical account, ancient rulers of the Sumerians and Babylonians (probably some of the most powerful authorities mankind has known) had introduced rules of compensation for lay-workers. To a large extent the CSP theory is a hybrid of normative and economically motivated approaches. Indeed it is unclear whether those rules were installed out of the rulers empathy for the workers or whether the true motive was his fear of public resent that would arise from absence of workers protection in the long run.

Partly this conceptual discomfort is addressed in the differentiation between two types of social responsibilities in the institutional principle. First there is a social-economic responsibility for general economic welfare and second, there is a social-human responsibility for preserving and developing human values. Further Davis excludes both extreme positions: the first stating that companies take power and have no responsibility for what they are doing and the second that hold companies responsible for 'everything'.

Woods' conception of the 'organizational principle' (sometimes called the 'principle of public responsibility') follows Preston and Post (1975). A central aspect of it is the public responsibility principle, that is a 'widely shared and generally acknowledged principle, directing and controlling actions that have broad implications for society at large or major portions of thereof.' Conform with this view, business should adhere to the standards of performance in law and the existing public policy process.

Pivotal to the 'public responsibility' approach is the idea that business and society are two interpenetrating systems. They accentuate the interdependence between social institutions. This differs from the functional theory of the relationship between business and society in which every social institution is considered as mono-functional. The argument is that since business and society are interpenetrating systems, firms should act socially responsible, because they exist and operate in a shared environment.

The idea that socially irresponsible behavior dispossesses companies from vital social capital also applies to remunerations. A company might be financially better off with socially less acceptable remuneration systems but destroy the support from its workers and public institutions which in the long run could have negative consequences for workers motivation and/or government subsidies.

According to Preston and Post, managerial standards derive from public policy. However they consider that public policy includes not only the literal

text of law and regulations but also the broad pattern of social direction reflected in public opinion, emerging issues, formal legal requirements and enforcement or implementation of practices (Preston & Post, 1975). They also acknowledged that discovering the contents of the principle of public responsibility is a complex and difficult task, variable over time, which requires substantial management heedfulness.

Simultaneously, they advocate business intervention in the public policy process in particular with regard to areas in which specific public policy is not clearly established or in transition. 'It is legitimate and may be essential, that affected firms participate openly in the policy formation' (Crane, 2008).

Wood (1991a) without agreeing in full with Preston and Post's theory, understands business and society relations in a likewise way, as interwoven rather than being distinct entities. Therefore, social expectations have direct influence on the shaping of CSR.

Preston and Post (1975) analyzed the range of managerial responsibility in terms of the primary and secondary involvement of the firm in its social environment. Primary involvement includes the essential economic tasks, as for example locating and constituting its facilities, acquire suppliers, hiring employees and marketing products. It further includes legal requirements. Secondary involvements follow (e.g. career opportunities), arising from the primary activity of selections and progress of employees.

The 'individual principle' is, in Woods' conception, the principle of 'managerial discretion'. Because managers are moral actors, they are obliged to exercise such discretion, within the very domain of CSR, if they can, towards socially responsible outcomes. In other words, this principle presumes that because managers possess discretion they are personally responsible for exercising it and cannot avoid this responsibility through reference to rules, policies and procedures (Wood, 1991a).

The principal idea is that a discretionary element of managerial decision making impacts on CSR performance. The situation studied in Chapter 6 is that someone has the choice between concealing or revealing undeserved benefits. Likewise a manager can or cannot tell the public that his company has benefited from windfall gains such as regulatory changes or that he personally received better rates for his mortgage loan since the company also dealt with his bank. To investigate the drivers of responsible behavior Chapter 6 presents an experimental paradigm that reproduces the structural elements of such situations while controlling for interfering factors.

Within the 'process of corporate social responsiveness' Wood (1991a) encompasses 'environmental assessment', i.e. adapting the organization to its environment in order to survive, 'stakeholder management', i.e. analyzing stakeholder relationships and processes to regulate interdependencies and relations accurately, and 'issues management', i.e. which includes external issues, as for example partnerships between public and private, community

involvement or social strategies, and internal issues like codes of conduct. Lastly, 'outcomes of corporate behavior' include studies on social impacts, social programs and social policies.

CSP theory also synthesizes relevant developments in the CSR field. It provides a coherent structure for assessing the relevance of research topics to central questions. However the theory falls short on several aspects. While the first comes from the vagueness of the concept of CSR proposals to integrate stakeholder perspectives to provide precision (Carroll, 1991, 2004) have not been abundant.

A more important weakness is the lack of integration between moral normative aspects and business activity. The institutional principle, which searches for legitimacy, does not approve the moral motivation or respect (Swanson, 1995). Furthermore the theory only puts emphasis on the social control of business by paying attention to public responsibility. E. Freeman and Liedtka (1991) have suggested that CSR merely exists to give a 'human' face to capitalism, but completely separates economics and morals.

Proponents of the CSP theory labor for a business model respectful to all people, defending human rights and human conditions at the workplace. Despite the moral content of such goals, the CSR literature was reluctant to connect with those moral contents, for a long time. Probably due to the preponderance of moral relativism terms such as 'values of our society', 'social expectation' or 'performance expectation' were used instead of more concrete ideas. Bowen (1953) talked about objectives and values of our society'. Similarly Frederick (1960) said that social responsibility means that 'businessmen should oversee the operations of an economic system that fulfills the expectations of the public. Sethi (1975) considers CSR to be congruent with the prevailing social norms, values, and expectations of performance. Carroll (1979) also emphasized the role of the changing expectations of society on the contents of CSR. Even moral responsibilities are behaviors that society expects companies to follow (Carroll, 1999).

Eels, Walton, and Fox (1961) also took into account moral considerations: When people talk about CSR they are thinking in terms of the problems that arise when companies casts their shadow on the social scene, and on the moral principles that ought to govern the relationships between the companies and the society. Likewise, Davis asserted that the essence of social responsibility "arises from concern for the moral consequences of one's acts as they might affect the interest of others" (Davis, 1968). Notably Frederick (1987) has advocated a move towards a normative moral foundation of CSR.

The practical implications of this limitation of CSP theory is unfolded in the studies in Chapter 4. In the situation people express their personal values and their trust in different SRI funds. Vague expression like 'values of our society' or 'social expectation' are measured more precisely in these studies. Moreover they asses the differences of trustworthiness between funds that have values similar to the personal values and those who have not. As-

sessing the importance of precise moral values for people's decisions allows for comparison to the importance of other factors, in particular to financial performance.

9.1.2 *Shareholder Value Theory*

SV theory claims that the only social responsibility of business is making profits and increasing the financial value of the company for shareholders. Social activities that a company could engage in are acceptable if prescribed by law or if they contribute to the maximization of SV. This is also the theoretical underlying of neoclassical economic theory, which is mainly concerned with the maximization of shareholder utility. The most notable representative of this view is Milton Friedman, who wrote: 'In such an economy there is one and only one social responsibility of business - to use resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competitions, without deception or fraud' (Friedman & Friedman, 2002).

This approach often introduced as SV oriented, generally takes SV maximization as the supreme reference for corporate governance and business management. In general it goes along with Agency Theory (Jensen & Meckling, 1976), which is prevalent in virtually every business school. According to this theory owners (commonly the shareholders) are the principal and managers are the agent. The latter bear fiduciary duties towards the former, and are generally exposed to incentives in order to align their economic interests with those of the owners, and thus with the maximization of SV.

SV theory is based on the premise of a 'free society' and objects to defendants of other conceptions of CSR that their theories undermine the basis of a free society: They are 'fundamentally subversive' (Friedman & Friedman, 2002). Friedman and Friedman (2002) published a mainstream media article saying that 'those who spread the idea of business as not concerned merely with profits are preaching pure and unadulterated socialism'. Social responsibility is a 'doctrine that harms the foundations of a free society'.

SV theory further contains several philosophical assumptions originated in John Lockes' atomistic vision of society. Lock wrote extensively on the laws of liberties for the individual person and the necessity of social contracts for living together. These ideas, along with Adam Smiths ideas on a free marked economy were of great influence for the American business framework.

People are seen as individuals that have desires and preferences. Some of their rights (right to live, private property, freedom) are specially emphasized. Society is no more than the sum of the individuals and the good of society is only the agreement on individual interests. This individual perspective is compatible with a sense of equality, understood as equal oppor-

tunity and has, with the formation of interest group pluralism a means of directing the society.

Private property, in this theory, is considered as an absolute right, limited only by legal restrictions aiming at limiting abuses. Private property is so important because it is considered to be the best guarantee of individual human rights. Property right is a concept that assures individual freedom from predatory powers of sovereigns. Sternberg (2000) is an strong advocate of property rights and argues that owners are legally eligible for the benefits of their investment and that any other use is unjust.

Regarding the concept of the firm, SV theory accepts the artificial nature of companies, that is companies are regarded as creations of the law (Friedman & Friedman, 2002), which established duties and rights for companies. First are seen as combinations of contracts (Williamson & Winter, 1991) that often adopt the principal-agent relation as in agency theory (Jensen & Meckling, 1976).

This vision has appealing aspects when one considers it applied to reality: People who own companies hire people to manage them and these in turn hire labor to work in the companies. Thus, managers and workers are employees of the owners. Executives also establish contracts with suppliers, creditors, and buyers. There is no doubt that the firm is a net of contracts and the persons among whom a contractual arrangement exists are clearly defined (Friedman & Friedman, 2002).

Another assumption that is implicit to SV theory is more controversial: the public and private spheres are fully separated. Business is considered as a private enterprise autonomous and only restricted by the regulations of the government without responsibility other than to make profits and create wealth. This view leads to the position that rejects any responsibility for the consequences of business activity. For example the consequences of a pollution only have to be taken into account if there is a legal requirement for it. Friedman says that it is unacceptable to make expenditures on reducing pollution beyond the amount that is in the best interests of the company or that is required by law in order to contribute to the social objective of improving environment (Friedman & Friedman, 2002). That means that the public good has to be pursued only by the public servants and politicians. Consequently in this view, if the executive assigns a companies resources to 'social objectives' that means that she is imposing taxes on shareholders.

One of the main consequences of property rights is that the owners of the means of production hire managers, who in turn defend the owners interests. But this raises a decisive problem: executives have fiduciary duties towards the owners. These fiduciary duties come from considering that 'an executive is an employee of the owners of the company' and as a consequence the owner has direct responsibilities towards her employers' (Friedman & Friedman, 2002).

The maxim that the purpose of business in society is to generate profits and that this is companies' only social responsibility is today expressed in a wider sense by saying that companies have to be oriented towards maximizing SV.

Two normative standards exist in SV theory. First, fiduciary duties of executives towards the shareholders or the companies' owners become an important standard for responsibilities. According to Friedman and Friedman (2002), an executive is an employee of the owners of the business' and that is the reason why he has direct responsibility to his employers. His or her responsibility is to conduct the business in accordance with the owners' desires, which generally will be to make as much money as possible.

A companies structure in shareholder theory generally includes a decision-making structure based on principal-agent theory and to facilitate the fiduciary duties of executives towards shareholders. In a similar way, corporate governance is basically attributed with the role of defending shareholders' interests. Management systems also need to be designed to maximize shareholder wealth.

The second normative standard is compliance with law, with a minimalist public policy. It covers observance of the 'rules of the game' of open and free competition and abiding the law.

Supporters of SV theory point out its efficiency in creating wealth. The management and governance of a company steered towards maximization of SV is not only to enrich the shareholders but also to achieve superior economic performance of the whole system. The argument goes as follows: conducting business for self interest, announcing profits as the ultimate goal, and operating under conditions of free and competitive markets within the context of minimalist public policy are the best conditions for wealth creation. This argument has been advocated by Jensen (2000) claims two centuries of empirical support. The conditions mentioned before provide incentives for innovation, cutting costs and prices, producing products with added value and raising capital for for future investments. Simultaneously, the tax system allows for a part of the created wealth to be shared by society through government. The negative outcomes of companies can simply be avoided through suitable laws and government interventions accompanied by private charity, which can deal with inequalities and other social issues.

The SV theory is prevalent and backed by the law in most countries and many companies are running under its guidance. Nevertheless, many critics have pointed out the weaknesses of this theory. At first, economic performance is not the whole public good. It is imaginable that profits go up while workers are exploited, natural resources irreversibly exhausted and the environment deteriorated.

For Adam Smith public good is provided by the 'invisible hand', and this idea is still present in approaches supporting SV theory. K. Arrow (1985) has criticized both the efficiency of markets and the separation of political and

economic power arguing that the effects of externalities through asymmetric information destroys Smiths' invisible hand and the connection between micro and macro levels and therefore the efficiency of capital markets.

In practice, the SV maximization approach often results in short term profits, for example through reduction in labor expenses, rather than long term profitability. Overall there is increasing evidence that economic success depends largely on management efforts to integrate other factors than shareholder interests, as for example those of employees, customers, suppliers, local communities, and other groups with stakes in the companies activities (stakeholders) (Crane, 2008). As successful business needs more than profits to exist in the long run. It requires trust, a sense of loyalty, and good relationships with all stakeholders. Consequently a lasting company need cooperation with those involved in or interdependent with the firm (L. T. Hosmer, 1995; Kay, 1993; Kotter & Heskett, 1992).

SRI is a showcase of two difficulties SV encounters when applied. First, it is not always clear what is in the best interest of shareholders. For example the financial performance of SRI is still under debate. If the inclusion of moral extra financial criteria represents a financial disadvantage it is in direct conflict with the legal principle of fiduciary duties fund managers have towards their clients (normative standard of SV theory [1]. If on the opposite SRI allows fund managers to outperform conventional funds (eg. because they penalize unethical companies before regulatory changes) all managers would be legally bound to include this information [2].

The second difficulty SV theory has is the balance of short term vs. long term shareholder interests. What is in the short term beneficial for shareholders might be wrong in the long run. Morally irresponsible business conduct might outperform in the short run (eg. by finding legal loopholes and passing the costs of externalities to the public) but that in the long run the society amends such behavior and withdraws vital support from the company. A major factor of this support a society has towards a business is trust.

Chapter 4 has as a starting point the assertion of a general loss of trust in the financial sector after the financial crisis of 2008. This loss of trust leads to the need for rebuilding public trust for its long term success. Since SRI funds carry moral values similar to people's personal values it is possible that they can help lever the funds perceived trustworthiness. Thus, from a SV perspective it would be important to assess whether a) SRI is a competitive advantage as compared to conventional investments and b) whether SRI has effects on intangible assets such as trust. Chapter 4 experimentally addresses the latter question.

1 A thorough discussion from a legal perspective and eventual regulatory solutions are provided by Siegl (2011).

2 Partisans of this argument often mention reputational risk that impacts stock valuation models in the long run.

Another difficulty of SV is the application of agency theory. Recently doubts have been raised as to whether current executive bonus practices are always in the best interest of the company and shareholders (Delves, 2003). The most prominent example are recursive executive remunerations voting structures (Bebchuk & Jesse M . Fried, 2003). Simply put most executives are also members of the boards of other companies and therefore determine the remuneration of their peers. By setting high standards they can thus influence on their own remuneration in their own interest [3].

In Chapter 5 one study evaluates the social acceptability of attempts to alienate manager and shareholder interests through remuneration systems that connect high bonuses to share value (stocks, stock options). Two other studies link the components of remuneration systems to social justice factors.

Three more major critiques have be made to SV theory. a) SV's pivotal concept of property rights has also been criticized as not acceptable for modern theories of property (Donaldson & Preston, 1995a). Drucker, Dyson, Handy, Saffo, and Senge (1997) have argued that the concepts of property and ownership no longer sufficiently describe what a company really is. Capital is neither the only nor the main asset of a company, whereas people who work in the company are increasingly its principal asset.

b) In regard to the constraints of law, critics point out that laws are imperfect and with limited effects. It is impossible, and inconvenient to regulate everything in business life. Furthermore laws are generally voted after some negative impact has already occurred. Moreover, often companies find loopholes in the law and many regulations strangle business creativity and entrepreneurship. Additionally, when interventions are to frequent and make use of laws, rules and other governmental instruments this is opposed to the minimalist regulation presumption, required for free competition.

c) some critics have been made on the narrow conception of human beings within this approach. People are reduced to the freedom of election and self interest, The vision of society is atomistic and business activity autonomous within society (Davis, 1960; Preston & Post, 1975; Sethi, 1975; Grant, 1991).

The focus on the personal value of telling the truth in Chapter 6 is an indirect application of these three critiques. In essence, the problem people face in the experiments is that they have to chose whether they are willing to reveal their undeserved benefits and incur adverse feelings like envy from others or if they are willing to keep them secret consciously hiding their advantage. Also, sometimes both options can come with a financial (dis-)advantages.

This situation combines the specific features of all three critiques: a) the legal concept of property right is not necessarily the determining factor of the decision to conceal or reveal ones undeserved benefits; b) in this situation there is often a legal gray area, a privileged treatment because of a social

3 Further, merger and acquisition activities albeit their disciplining effects on managers, can cause economic instability and insecurity (Delves, 2003)

status or position might not be illegal nevertheless it will be perceived as misplaced and the decision maker might take account for this. c) Of course there are also personal factors that cold play a role in the decision to reveal or conceal. In particular personal values and adhesion to a given social norm like truth telling might be salient.

9.1.3 *Stakeholder Theory*

ST, in contrast to shareholder theory, considers all people or groups with a 'stake' in the company. In General, stakeholders are groups and individuals who benefit or are harmed by the actions of a company. From such a perspective, CSR can be conceived in the way that companies have an obligation to constituent groups in society other that stockholders and beyond that prescribed by law (Jones, 1980).

On the other hand not all authors agree that business responsibilities towards the firm's stakeholders fall in the domain of CSR. For example, E. Freeman and Liedtka (1991) defend the stakeholder approach, and affirm that CSR is not a useful idea and ought to be abandoned. They think that the question of CSR does not arise when the term stakeholder is widely enough defined to include suppliers, community, employees, customers, and financiers. They write "once we come to see each of these groups, and the people within them, as legitimate partners in the dialog about 'what is this company going to be,' the social responsibility of the resulting entity is moot". Alternatively they suggest that companies have responsibility to all the parties affected by their activity, in other words they have responsibilities towards the stakeholders.

R. E. Freeman (2005) have suggested that the genuine responsibility of business is to create value for stakeholders, including local communities. They have argued that the main goal of CSR is to create value for stakeholders by fulfilling the firms responsibilities towards them without separating business from morals. Accordingly they propose to replace the term CSR with 'company stakeholder responsibility' to mark a different interpretation of the CSR meaning. Similarly, Wheeler, Colbert, and Freeman (2003) have proposed to reconcile the stakeholder approach, CSR and sustainability with the creation of values (economic, social, ecologic) for constituencies of the firm and not only economic value for shareholders. This stakeholder value oriented theory for understanding the responsibilities of business is thus quite different form SV theory.

Even though there exists more than one approach, a proper definition of the theory is given by Clarkson (1995): "The firm is a system of stakeholders operating within the larger system of the host society that provides the necessary legal and market infrastructure for the firms activities. The purpose of the firm is to create wealth or value for its stakeholders by converting their stakes into goods and services.

R. E. Freeman (1984) conceives ST as a way of thinking about strategic management. It should provide a way of conceiving how a company should set and implement a direction. Besides being a managerial theory it is also a normative theory which requires management to have moral duty to protect the company as a whole, and as a consequence of this goal, to protect the interests of all stakeholders. Management has the duty to look after the health of the company, which involves balancing the multiple claims of conflicting stakeholders (Evan & Freeman, 1988).

ST requires companies to be managed for the benefit of its stakeholders: customers, suppliers, owners, employees and local communities and to assure the maintain the continuity of the firm (Evan & Freeman, 1988). The structure of decision making is based on the discretion of top management and corporate governance and should include stakeholder representatives.

The concept of stakeholder is very close to the one of stockholder, in some sort it is a generalization of it. According to R. E. Freeman (1984) it is meant to generalize the notion of stockholder as the only group to whom management needs to be responsible. The notion of stakeholder can be understood in two senses: In its narrow sense, the term includes those groups who are vital to the continuity and success of the company; in a wide sense this includes any group or person who can affect or is affected by the company (R. E. Freeman & Reed, 1983; R. E. Freeman, 1984). Accordingly, stakeholders are identified by the interest they have in regards to the actions of the company, and it is assumed that the interests of all stakeholders have an intrinsic value (Donaldson & Preston, 1995b).

In both situations, SRI funds and remuneration, presented in Chapters 4 and 5 there could be a narrow and a wide interpretation of stakeholders. In a narrow sense stakeholders of SRI are those who posses shares of the investment fund, the employees of the investment fund and also of companies the fund is invested in. In a wider sense stakeholders also comprise those who are affected by the actions of the fund. Since SRI claim to impact on society this means we all are stakeholders in a wide sense. The situation of remunerations is similar in many ways. In the narrow sense shareholders, employees, customers and eventually suppliers are the stakeholders, whereas in the wide sense we all are stakeholders. The media coverage of high CEO bonuses is a very good example of the impact on society that could justify a wider interpretation.

Both, stakeholder and shareholder theory, have in common their convictions about democracy and market economy principles. Nevertheless they differ on several other points. In ST the firm is regarded as an abstract entity where a variety of interests converge rather than a complex set of contracts. The function of the firm is related to the interests of various individual people or groups who influence on or are influenced by the activities of the company. Put in a different way, the purpose of a company is to serve as a vehicle for coordinating stakeholder interests (Evan & Freeman, 1988).

Legitimacy of ST is grounded on two moral principles called 'Principle of Corporate Rights' and 'Principle of Corporate Effects' (Evan & Freeman, 1988). Both principles invoke Kant's dictum of respect for persons. The former says that companies and managers are not allowed to violate the legitimate rights of others to determine their future. The latter emphasizes the responsibility for consequences by stating that companies and managers are responsible for the effects of their actions on others. They further established two more principles ("Stakeholder Management Principles") to guide managerial decision making (Evan & Freeman, 1988):

P1: The company ought to be managed for the benefit of its stakeholders: Its customers, suppliers, owners, employees and local communities. The rights of these groups must be ensured, and further the groups must participate, in some sense, in decisions that substantially affect their welfare.

P2: Management bears a fiduciary relationship to stakeholders and to the company as an abstract entity. It must act in the interests of stakeholders as their agent, and it must act in the interest of the company to ensure the survival of the company, safeguarding the long-term stakes of each group.

The three studies presented in Chapter 5 could serve as a template for including stakeholders in corporate decision making as stipulated in P1. In those studies people (stakeholders in the wide sense) make judgments about different remuneration situations. The particular arrangement of the situations allows to extract peoples opinions on such complex situations in which many parameters need to be considered.

ST has been adapted by different authors to several moral theories: Feminist Ethics (Wicks, Gilbert, & Freeman, 1994; Burton & Dunn, 1996), common good theory (Argandoña, 1998), the integrative social contracts theory (Donaldson & Dunfee, 1994) and the principle of fairness (R. A. Phillips, 1997). This moral pluralism is encouraged by R. E. Freeman (1994) who states that ST can hold different moral models.

One of the central tasks of the stakeholder approach is balancing the interests of the different stakeholders. A useful distinction that helps with this complex task is made by Carson (1993):

> Business executives have positive duties to promote the interests of all stakeholders. (These are *prima facie* duties) But the duties to some stakeholders are more important than the duties to other stakeholders. Thus, sometimes lesser interests of more important stakeholders take precedence over the greater interests of more important stakeholders. Positive duties of stakeholders are constrained by negative duties, as for example not to lie or break the law.

Practical applications of this theory are often found in codes of conduct. For example the seven Principles of Stakeholder Management proposed by the Clarkson Center for Business Ethics (Clarkson Center for Business Ethics, 1999):

1. Managers should acknowledge and actively monitor the concerns of all legitimate stakeholders, and should take their interests appropriately into account in decision-making and operations.
2. Managers should listen to and openly communicate with stakeholders about their respective concerns and contributions, and about the risks that they assume because of their involvement with the company.
3. Managers should adopt processes and modes of behavior that are sensitive to the concerns and capabilities of each stakeholder constituency.
4. Managers should recognize the interdependence of efforts and rewards among stakeholders, and should attempt to achieve a fair distribution of the benefits and burdens of corporate activity among them, taking into account their respective risks and vulnerabilities.
5. Manages should work cooperatively with other entities, both public and private, to insure that risks and harms arising from a company's activities are minimized and, where they cannot be avoided, appropriately compensated.
6. Managers should avoid altogether activities that might jeopardize inalienable human rights (e.g., the right to life) or give rise to risks which, if clearly understood, would be patently unacceptable to relevant stakeholders.
7. Managers should acknowledge the potential conflicts between (a) their own role as corporate stakeholders, and (b) their legal and moral responsibilities for the interests of stakeholders, and should address such conflicts through open communication, appropriate reporting and incentive systems, and, where necessary, third party review.

As comes clear form these principles, they propose a normative approach for management and not an inflexible code to be applied unequivocally. They consist of a set of guidelines that respect stakeholders' legitimate interests an rights. They also combine both, the principle of a company's effects and the principle of corporate rights.

It also becomes clear that those principles are addressed to the management and their application it left to management discretion to a large extent. Knowing the drivers of managerial behavior thus would be an edge in implementation of ethical principles. Financial incentives are commonly thought to be a main driver of managerial behavior. Whit regard to this their ef-

fectiveness in encouraging (discouraging) the decision to reveal undeserved benefits is tested in Chapter 6.

There exist many advantages of ST. The first of its strengths is that it seems morally superior to SV theory because it takes into account not only what it required by law but also the very interests of stakeholders in executive-stakeholder relations. As a consequence the duties of managers are wider than managements fiduciary duties to the shareholders. Additionally, property rights considerations better fit with justice requirements than SV theory. Finally, ST, is more respectful of human dignity and rights.

It further contributes to a language that is more in line with human dignity that other languages which tend to signify that people are mere human resources and a company a matter of ownership, which is bought and sold, independently form the consideration that the company is run by real persons. This addresses the need to reverse the language and measures of business that Drucker et al. (1997) calls for: "A good business is a community with purpose, and a community is not something to be owned. A community as members, and those members have rights, including the right to vote or express their views on major issues."

A second strength of ST is that it replaced that vagueness of CSR concepts by addressing concrete interests and practices and visualizing specific responsibilities to specific groups of people affected by business activity (Blair, 1995; Clarkson, 1995).

Third, ST is not a loose moral theory without connection to business management, but a managerial theory concerned with business success. The normative aspects come later and are closely ties to managerial decision making. Stakeholder management is well accepted in many companies and provides guidelines that can lead to business success in the long term (Collins & Porras, 1994). However there is still debate about the relationship between financial performance and ST (Berman, Wicks, Kotha, & Jones, 1999).

With these strength also come weaknesses, or better aspects of the strategy that have been criticized. R. Phillips (2003) has argued that criticisms sometimes take the form of critical distortions and at other times of friendly misinterpretations. The latter often consider that ST is socialism and refers to the entire economy, they also interpret it as a moral doctrine. Another misinterpretation is to apply ST only to companies and to deduce that it requires legal changes.

Others have criticized that ST is unable to provide a specific objective function for companies. Since the 'balancing of stakeholder interests abandons an objective basis for evaluating business actions (Jensen, 2000; Sundaram & Inkpen, 2004). R. E. Freeman, Wicks, and Parmar (2004) have replied to this that, (a) the goal of creating value for stakeholders is decidedly pro-shareholder, (b) creating value for stakeholders creates appropriate incentives for managers to assume entrepreneurial risk, (c) having one objective function will make governance and management difficult, (d) it is easier to

make stakeholders out of shareholders rather than vice versa, and (e) in the event of a breach of contract or trust, shareholders, compared with stakeholders, have protection (or can seek remedies) through mechanisms such as the market price.

As mentioned earlier on the methods used in Chapter 5 are a first step towards objective measures of stakeholder interests and can serve as templates. The question of socially acceptable remunerations is but one aspect managerial decisions that concern stakeholders. Similar studies could be conducted in other situations like supply chain responsibility, environmental politics or human resource management.

ST has also been criticized for being an excuse for managerial opportunism (Jensen, 2000; Macroux, 2000; Sternberg, 2000). The argument goes as follows: Managers are able to justify self-serving behavior by appealing to the interests of those stakeholders who benefit. Hence the ST, effectively destroys business accountability because a business that is accountable to all, is actually accountable to none. However, R. Phillips (2003) reply that managerial opportunism is a problem that is not specific to ST. Furthermore, just because managers can justify self serving behavior by referring to stakeholder interests does not give persuasiveness to their argument per se.

Another criticism is that ST primarily concerns the distribution of final outputs (Macroux, 2000). To this R. Phillips (2003) answer that actually ST is concerned with who has input in decision-making as well as with who benefits from the outcomes of such decisions.

Divers criticisms come from accepting that managers bear a fiduciary duty to all stakeholders and that all of them are supposed to be treated equally, balancing their interests (Macroux, 2000; Sternberg, 2000). Macroux (2000) brings forward the argument that stakeholder-executive relations contemplated by stakeholder theories are necessarily non-fiduciary, while shareholder-executive relations possess all aspects that make fiduciary duties morally necessary to those relations. He concludes that ST is morally lacking because (a) it fails to account for shareholders being owed fiduciary duties, and (b) treats all stakeholders' interests equally despite shareholders' legitimate claim to managerial partiality as required by the fiduciary duties owed to them. R. Phillips (2003) objects to this that only legitimate interests should be considered in ST, and Gioia (1999) adds that a normative theory based on 'shouting from the sidelines' that decision makers should do the right thing sound credible to managers.

Another objection is that ST admits several interpretations (e.g. feminist, ecological, fair contracts). According to Hummels (1988) each interpretation provides a different set of stakeholders and stresses the importance of specific values, rights and interests. But, different stakeholder interpretations lead to different distributions of benefits and burden, of values, rights and interests.

It also has been objected that stakeholder representation in corporate decision making has difficulties in justification and implementation. Etzioni (1998) has argued that even though the theory can justify stakeholders taking part in corporate governance, it cannot be implemented without effect on the common good: 'while all stakeholders and not only shareholders have fair claim to a voice in corporate governance, recognizing such claims may be damaging to the well-being of the economy, and hence injurious to the common good. It might be further maintained that such considerations should outweigh the fairness claim (Etzioni, 1998).

9.1.4 *Corporate Citizenship*

CC theory is somewhat grounded in the observation that business leaders have been involving their companies in philanthropic activities and donations to communities where they operate. This observation has been interpreted as an expression of good CC by some. Thus, for Carroll (1991) being a good corporate citizen means actively engaging in acts or programs to promote human welfare, whereas being a good global corporate citizen is related to philanthropic responsibility, which 'reflects global society's expectations that business will engage in social activities that are not mandated by law nor generally expected of business in a moral sense' (Carroll, 2004). However the term CC is also used to designate CSR (Wood & Logsdon, 2001; Matten & Crane, 2005). Beyond this differentiation in meaning, other scholars have pointed out that CC is a different way of understanding the role of business in society. Birch (2001) considers CC as innovation, whereas CSR is more concerned with social responsibilities as an external affair. Wood and Logsdon (2001) think that the linguistic difference between CSR and CC includes a strong difference in how business organizations should act in respect to stakeholders. Similarly Windsor (2001) believes CC is a managerial movement that substitutes a different conception for social responsibility. Whereas Moon, Crane, and Matten (2005) suggest that CC is a metaphor for business participation in society.

The term citizenship has its origins in political science. The term 'citizen' is supposed to evoke an individual persons' duties and rights within a political community. It also contains the more general idea of being part of a community. In the Aristotelian tradition, companies are supposed to contribute to the common good of society, and in particular to the community, as a good citizenship because they are seen as an integral part of society. In this tradition, the notion of citizen is far more linked to participation then to individual rights. Emission of SRI by large banks would be considered a participation in the improvement of environmental or social affairs, rather than a question of individual rights for example.

Aristotle considers that being a citizen is mainly to have 'the right to participate in the public life of the state, which was more in the line of duty

and a responsibility to look after the interest of the community (Erisksen & Weigard, 2000). But not all approaches on CC share this view. However they all are focused on rights and, even more on duties, responsibilities and possibilities for partnerships between business and societal groups and institutions.

According to Solomon (1992) the first principle of business ethics is that the company itself is a citizen, a member of the larger community and inconceivable without it. Companies like individual persons are part and parcel of the communities that created them, and the responsibilities they bear are not the products of argument or implicit contracts, but intrinsic to their very existence as social entities. From this point of view a company that adopts socially unacceptable remuneration principles would undermine the larger community from which it originates and which is essential for the company's existence.

This view contrasts perspectives of CSR that, implicitly or explicitly, agree with Friedman's assumption that companies are autonomous, independent entities, whether or not they consider their obligations towards the surrounding community (Solomon, 1992). Friedman's point is that the regulation of failures like excess bonus remunerations should be dealt with outside of the company, if they do not harm financial interests.

For Waddock and Smith (2000) CC is in essence about the relationships that a company develops with stakeholders. They assume that being a good corporate global citizen, is largely about respect for others. But simultaneously this involves building good relationships with stakeholders and this in turn is the same thing as doing business well.

Most supporters of corporate citizen theory caution against an overhasty application of the citizenship concept to business. In their view citizenship refers primarily to individual people. For instance, (Logsdon & Wood, 2002), analyzed the concept of 'citizen' and then considered possible meanings of 'corporate citizen' and then 'business citizenship'. They conclude that business citizenship is not equivalent to individual citizenship, it rather derives from and is secondary to individual citizenship.

Parry (1991) has made a distinction between three views of citizenship: minimalist, communitarian, and universal rights. A minimalist view of citizenship regards citizens merely as residents of a common jurisdiction who acknowledge certain duties and rights. The communitarian view ties citizens in a particular social context, where the rules, traditions, and culture of the own community are highly meaningful, along with the participation in such a community. Third is the universal human rights perspective of citizenship which grounds on the moral assumption of rights as necessary for the recognition of human dignity. Logsdon and Wood (2002) believe that, although business organizations can be seen from any of these three perspectives, only the third one is suitable for global companies. Thus, based on univer-

sal human rights and on integrative social contracts theory (Donaldson & Dunfee, 1994), scholars have developed global business citizenship theory.

Global business citizen theory holds that organizations are vehicles for manifesting human creativity. They facilitate the creation of surplus value, and thus allow people and societies to do more with resources. The interests of companies and their actions are impossible to be captured entirely in contracts as they span over multiple locales. In fact, each company is seen as a participant in a network of stakeholder relationships. Because companies can be considered as citizens, with a secondary status to individuals, they also have weaker rights and duties.

In a nutshell, global business citizenship can be seen as a set of policies and practices that allow a business organization to abide by a limited number of universal moral standards, to respect local cultural variations that are consistent with those standards, to experiment with ways to re-conciliate local practice with the standards when they are not consistent, and to implement systematic learning processes for the benefit of the organization, local stakeholders, and the larger global community (Logsdon & Wood, 2005b). Concerning specially multinational companies, they explain that a global business citizen is a multinational enterprise that responsibly implements duties to people and to societies within and across national and cultural borders (Wood & Logsdon, 2001).

The process of global business citizenship has several requirements. First, it needs a set of fundamental values that are enclosed in the corporate code of conduct and in corporate policies that express universal moral standards. Second, an implementation throughout the organization with awareness of where the code and policies fit well and where they might not fit stakeholder expectations. Third, analysis and experimentation of how to deal with problem cases. fourth and last, systematic learning processes to communicate the results of implementation and experiments internally and externally (Logsdon & Wood, 2005a).

The first requirement grounds on psychology because it calls for universal moral values. Psychologist have documented many values that are fundamental for people. Trading values lie love, justice or honor for secular values can even lead to adverse reactions (Tetlock, 2003; A. P. Fiske & Tetlock, 1997). However, research on those protected values has also shown that they can arise from social norms (Ritov & Baron, 1999) and that not all people adhere to the same degree (Baron & Spranca, 1997).

Building on insights from this previous research Chapter 6 focuses on one particular universal values, namely truth telling. The decision to reveal the truth to others is highly estimated in most cultures and linked to feelings of honor (Wang et al., 2009). It is also essential in building long term trust in organizations (Mishra, 1996) and excuse of immoral behavior (Gibson et al., in press).

A different perspective on CC is offered by Matten and Crane (2005): Extended theoretical conceptualization of CC. Their starting point is an examination of the notion of citizenship from the perspective of its original political meaning. They further consider that globalization has changed the relative roles of governments and companies in administering citizenship rights, with companies assuming this role in either of the following cases: Government ceases to administer citizenship rights, government has not yet administered citizenship rights, or the administration of citizenship rights is beyond the reach of the nation-state government.

They further assert that companies are active in citizenship and exhibit citizenship behavior (Matten & Crane, 2005), yet the company is neither a citizen itself nor does it have citizenship. CC is described as the role of the company in administering citizenship rights for people. This conducts to the acknowledgment that companies administer certain aspects of citizenship for others, including traditional stakeholders like employees, customers or shareholders, but also including those with no direct relationships to the company.

In describing how companies administer citizenship rights, particularly in countries where governments fail in those responsibilities, the extended theoretical conceptualization differentiates three social roles tied to three types of rights (social, civil and political) recognized in democratic societies. Companies are providers of social rights by supplying people with social services which provide the freedom to participate in society, like education and health care. Companies are also providers of civil rights by enabling citizens civil rights which provide freedom from abuses and third parties. Last, companies are also providers of political rights being an additional conduit for the exercise of individual political rights.

The provision of those three rights comes with the responsibility of maintaining it. This is equivalent to the state who provides national security and has the responsibility to maintain it. Providing people with social rights for example implies the responsibility to maintain those social rights and guarantee highly acceptable wages, equal opportunity in education and up to date health care.

However the proposal of Matten and Crane (2005) is merely descriptive. Actually they question whether this triple role of companies is acceptable, since the administration of the three rights is not mandatory but rather up to managerial discretion. If companies act as corporate citizens in the described way, how can they be held accountable towards society? Governments are accountable to citizens and can be discharged form their responsibilities through elections. This is not the case for companies (Matten & Crane, 2005).

When it comes to strengths of the CC theory and the global business citizenship concepts a first one is probably that it might be more appealing to some practitioners simply because of its terminology. Indeed, concepts

such as 'business ethics' or 'social responsibilities' are thought to oppose business whereas CC can be seen as the fact that corporate citizens capture their rightful place in society, next to other citizens forming a community (Matten, Crane, Chapple, & Chappie, 2003).

A second item is in overbearing the narrow functionalist vision of business which reduces it to a purely economic purpose. Not without neglecting the basic economic responsibility of business, the notion of CC emphasizes the social and moral dimensions of companies and their function in securing human rights, administer social welfare and human development in our societies.

Another positive feature of CC is its extensive global reach, which seems increasingly appropriate in globalization. It argues that, from an economic perspective all citizenship activities that avoid risks, enhance a company's reputation, and as a consequence increase long term financial performance (Vidal, 1999). Gardberg and Fombrun (2006) argue that strategic investments in citizenship programs are comparable to investments in R&D or advertising. Under certain conditions citizenship programs can help companies that are in the process of globalization to reduce the perception of being perceived as peregrine by establishing ties within local communities and enhancing reputation among local employees, customers and regulators.

A recurring criticism of CC is that it is a concept that lacks focus, and includes many different subjects, like public-private partnerships, corporate ethical practices, corporate community economic development, corporate voluntarism, corporate community involvement or corporate brand, image and reputation management (Windsor, 2001). The allegation is that the theory lacks unity and coherence and serves as eponym for many loose practices.

Both approaches, global business citizenship and extended theory of CC, have received specific criticisms. Moon et al. (2005) acknowledge some merit to global business citizen theory, nevertheless they argue that the approach is limiting future developments. First, they argue that it is incapable of adequately examining the the underlying metaphorical nature of the application of citizenship to companies. Second, it relies on quite simplistic notions of citizenship that do not allow to establish normative or conceptual potential of the term. Third, the approach cannot contribute to the understanding of business society relations. Fourth, it does not provide a normative base for the social role of companies since it is essentially voluntary. Fifth, its narrow view limits the scope of companies activities. For example it has difficulties to model actions such as political donations, lobbying or involvement in rule making. Lastly, they argue that the application of a concept like citizenship to companies needs a clearer definition of the conditions required to extend the concept form individual people to organizations.

Because its conceptualization of CC is considered highly speculative with little empirical support, extended theory of CC was also criticized (van Oosterhout, 2005). Further the approach fails to discuss corporate rights along with responsibilities. Additionally it is not explicit why and how CC can emerge and be sustained and what companies may expect in return for the responsibilities they assume. Crane and Matten (2005) responded to these criticisms and clarified the position of CC theorists.

Another objection to CC is that it is absolutely dependent on managerial discretion and has a philanthropic ideology (Windsor, 2001). The criticism is that those who use this concept do so to take advantage of increasing social expectations of corporate benefits in times of government cutbacks and of strategic management aimed at value creation by the company. The reproach of CC is flawed if one considers a wider vision of business as a member of the society and the definition of citizenship more closely related to moral duties. In addition, even in the case that some specific programs of CC are related to philanthropy there can be beneficial effects and even long term value creation. Besides, the global business citizenship approach is about universal human right, and not philanthropy in the first place.

Relating to its managerial ideology, CC is definitely managerial centered, but this is not necessarily a negative feature, and to beware abuses, operand accountability and social controls may be established.

One more issue that could be considered a feebleness or open question in CC theory is the lack of explicitness about who is charged with establishing the standards for global citizenship (Munshi, 2004). This issue could be addressed by considering that sets of universal standards and principles already exist. One could, for example think of the UN Universal Declaration of Human Rights, the UN Global Compact, the UN Principles for Responsible Investment and so forth. Furthermore there is increasing evidence on common grounds in religions, wisdom traditions and values (Moses, 2001; Tetlock, 2003; Ritov & Baron, 1999; Caldwell & Dixon, 2009; A. P. Fiske & Tetlock, 1997).

Finally another weakness is despite the fact that universal human rights can be a measure in the direction of a CC conception based on relational stakeholder networks, it can be objected that this is a minimalist approach. A supportive relationship with stakeholders should require solidarity with them and not merely respect for their rights. Most people would agree that a good society must be respectful of human rights, but the chances are high that this agreement is not a sufficient condition to build up a good society.

10

MATERIALS FROM SECTION 1

10.1 EXPERIMENT 1

Experiment 1 comprised a Visual Basic script implemented in a .pptx file. The file can be downloaded at https://dl.dropbox.com/u/2877944/Questionnaire.ppsm. If the link is no longer active please send an email to the author.

10.2 EXPERIMENT 2: LIMESURVEY SCRIPT

```
// JavaScript Document
// Pour la question 1

Maintenant imaginez qu'un de vos amis, soucieux de l'éthique, veuille investir dans un fond éthique
qui considère des valeurs morales lors de la sélection de titres.
Votre ami vous sollicite pour savoir s'il peut faire confiance aux fonds. Nous vous demandons
d'indiquer pour chaque fond décrits ci-dessous votre degré de confiance.

( de 0 : Pas du tout d'accord à 10 : Tout à fait d'accord).
<script src="http://enquetes.univ-tlse2.fr/scripts/Mon_Nouveau_Questionnaire.js" type="text/javascript"></script>
<script type="text/javascript" charset="utf-8">
ConstitueLesLibels('{INSERTANS:53338X451X2615}', {INSERTANS:53338X451X2616A},{INSERTANS:53338X451X2616B}, {INSERTANS:53338X451X2616C}, {INSERTANS:53338X451X2616D}, {INSERTANS:53338X451X2616E}, {INSERTANS:53338X451X2616F}, {INSERTANS:53338X451X2617A}, {INSERTANS:53338X451X2617B}, {INSERTANS:53338X451X2617C}, {
```

```
    INSERTANS:53338X451X2617D}, {INSERTANS:53338
    X451X2617E}, {INSERTANS:53338X451X2617F});
</script>

// Pour les sliders


<script type="text/javascript" charset="utf-8">
disp(lib1);
</script>
//
<script type="text/javascript" charset="utf-8">
disp(lib2);
</script>
//
<script type="text/javascript" charset="utf-8">
disp(lib3);
</script>
//
<script type="text/javascript" charset="utf-8">
disp(lib4);
</script>
//
<script type="text/javascript" charset="utf-8">
disp(lib5);
</script>
//
<script type="text/javascript" charset="utf-8">
disp(lib6);
</script>
//
<script type="text/javascript" charset="utf-8">
disp(lib7);
</script>
//
<script type="text/javascript" charset="utf-8">
disp(lib8);
</script>
//
<script type="text/javascript" charset="utf-8">
disp(lib9);
</script>
//
<script type="text/javascript" charset="utf-8">
disp(lib10);
</script>
//
<script type="text/javascript" charset="utf-8">
disp(lib11);
</script>
//
```

```
<script type="text/javascript" charset="utf-8">
disp(lib12);
</script>
```

```
var phrase1A ="Le fond <b>&quot;Fidelity Value Green
    &quot;,</b> <b>un fond &eacute;thique</b>, ";
var phrase1B="Le fond <b>&quot;Fidelity Value Growth
    &quot;,</b> ";
var phrase2="g&eacute;r&eacute; par " ;
var phrase3F="<b>Susanne Roubin</b><br/>";
var phrase3M="<b>Mark Buffer</b><br/>";
var phrase4="est  profitable depuis 10 ans et a
     eu une des meilleures performances dans son
    secteur d'activit&eacute;.<br/>";
var phrase5="<br />R&eacute;cemment il a &eacute;t&
    eacute; &eacute;valu&eacute; par une agence de
    notation &eacute;thique et <br/>a re&ccedil;u d'
    excellentes notes dans les domaines <br />";

var phrase6A = "de la conformit&eacute; &agrave; la
    loi nationale";
var phrase6B = "internationale et de la transparence
     de l'entreprise";
var phrase6C = "du respect des droits des
    travailleurs";
var phrase6D = "de la protection de l'environnement"
    ;
var phrase6E = "des actions pour la sant&eacute; et
    la s&eacute;curit&eacute; pubique";
var phrase6F = "de la lutte contre la corruption";

var phrase7 = "<br />Est-ce que vous jugez ce fonds
    digne de confiance ? <br /><br />";

var label = "";
var estUnHomme = false;
var monTab1 = new Array;
var monTab2 = new Array;
var lib1 ="";
var lib2 ="";
var lib3 ="";
var lib4 ="";
var lib5 ="";
var lib6 ="";
var lib7 ="";
var lib8 ="";
var lib9 ="";
var lib10="";
var lib11="";
```

```
var lib12="";

function disp(txt) { document.write(txt) }

function inverser(i,j) {
        var temp1=monTab1[i];
  var temp2=monTab2[i];

  monTab1[i]= monTab1[j];
  monTab2[i]= monTab2[j];

        monTab1[j]=temp1;
        monTab2[j]=temp2;
}

function TriTab() {
        // tab est le nom du tableau a deux dim,
           dont la valeur numérique
        // est en 0, trie par ordre croissant

        var n=monTab1.length;
        var continuer=true;
        var i=0;
        var iter=0;



        while (continuer)
    {
                iter++;
                continuer=false;
                for (i=0;i<n-1;i++)
        {
                        if (Math.min(monTab1[i],
                           monTab1[i])!= monTab1[i
                           ])
           {
           inververser(i,i+1);
           continuer=true;
           }
                    }
          }

  //    for (i=0;i<n;i++) {tab[i]=ordre*tab[i];}

}

function DispTab() {
        var nb=monTab1.length;
        for (var i = 0; i < nb; i++)
```

```
80                  disp("El&eacute;ment n° "+i+" : <B>"
                        +monTab1[i]+" "+monTab2[i]+"</B><
                        BR>");
    }
82
84  function InitProfilA(A, B, C, D, E, F)
    {
86  monTab1[0] = A;
    monTab1[1] = B;
88  monTab1[2] = C;
    monTab1[3] = D;
90  monTab1[4] = E;
    monTab1[5] = F;
92  }

94  function InitProfilB(A, B, C, D, E, F)
    {
96  monTab1[0] = monTab1[0] + A;
    monTab1[1] = monTab1[1] + B;
98  monTab1[2] = monTab1[2] + C;
    monTab1[3] = monTab1[3] + D;
100 monTab1[4] = monTab1[4] + E;
    monTab1[5] = monTab1[5] + F;
102 }

104 function InitTabPhrases()
    {
106 monTab2[0]= phrase6A;
    monTab2[1]= phrase6B;
108 monTab2[2]= phrase6C;
    monTab2[3]= phrase6D;
110 monTab2[4]= phrase6E;
    monTab2[5]= phrase6F;
112 }

114 function Les2Max()
    {return(monTab2[4]+ " et " + monTab2[5]);
116 }
    function Les2Min()
118 {return(monTab2[0] + " et " + monTab2[1]);
    }
120 function Les2Midle()
    {return(monTab2[2]  + " et " + monTab2[3]);
122 }

124 function InitLab()
    {
126 label ="";
    }
128
```

```
/*
*/
function SelonEthique(ethique)
{
if(ethique == true)
   {
   label = label + phrase1A + phrase2 ;
   }
else
   {
   label = label + phrase1B + phrase2 ;
   }
}
 /*
 */
function  SelonLeSexeInv(inverse)
{
femme = false;
if((estUnHomme == true ) && (inverse == false))
   {
   femme = false;
   }
if((estUnHomme == false ) && (inverse == true))
   {
   femme = false;
   }
if((estUnHomme == true ) && (inverse == true))
   {
   femme = true;
   }
if((estUnHomme == false) && (inverse == false))
   {
   femme = true;
   }
if(femme == true)
  {
   label = label + phrase3F ;
  }
else
  {
  label = label + phrase3M ;
  }
}

function Suite1()
{
   label = label + phrase4 + phrase5 ;
}

function Suite2()
{
```

```
180     label = label + phrase7 ;
}
182
function ConstitueUnLabel(ethique, inverse, type)
184 {

186   InitLab();
  SelonEthique(ethique);
188   SelonLeSexeInv(inverse);
  Suite1();
190   if (type == 1)
  {
192    label = label + Les2Min();
  }
194   if (type == 2)
  {
196    label = label + Les2Midle();
  }
198   if (type == 3)
  {
200   label = label + Les2Max();
  }
202
  Suite2();
204   //disp(label) ;

206   return(label);
}
208
function ConstitueLesLibels(Sexe, TabA1, TabA2,TabA3
    , TabA4, TabA5, TabA6, TabB1, TabB2, TabB3, TabB4
    , TabB5, TabB6)
210 {
if( Sexe == 'Féminin')
212   {
  estUnHomme = false;
214   }
else
216   {
  estUnHome = true ;
218   }

220   InitProfilA(TabA1, TabA2, TabA3, TabA4, TabA5,
      TabA6);
  InitProfilB(TabB1, TabB2, TabB3, TabB4, TabB5,
      TabB6);
222   InitTabPhrases();
  TriTab();
224   // DispTab();


226
```

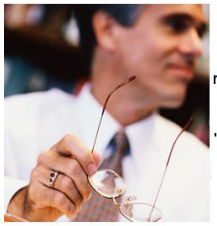
```
  lib1 = ConstitueUnLabel(true,false,1);
  lib2 = ConstitueUnLabel(true,false,2);
  lib3 = ConstitueUnLabel(true,false,3);
  lib4 = ConstitueUnLabel(true,true,1);
  lib5 = ConstitueUnLabel(true,true,2);
  lib6 = ConstitueUnLabel(true,true,3);
  lib7 = ConstitueUnLabel(false,false,1);
  lib8 = ConstitueUnLabel(false,false,2);
  lib9 = ConstitueUnLabel(false,false,3);
  lib10 = ConstitueUnLabel(false,true,1);
  lib11 = ConstitueUnLabel(false,true,2);
  lib12 = ConstitueUnLabel(false,true,3);

}

  /*
  Debut de d'activation  Lien Lime Survey
  */

//ConstitueLesLibels('Femme', 6, 5, 4, 3, 2, 1, 6,
    5, 4, 3, 2, 1) ;
```

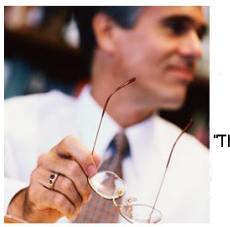
10.3 EXPERIMENT 3



"The fund only selects companies that respect workers rights and help to protect the environment."

"The fund was profitable for six out of ten years"

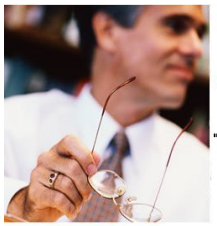
How much do you personally trust this investment fund to do what is right?



"The fund only selects companies that act in a competitive manner and have responsible supply chain politics."

"The fund was profitable for nine out of ten years"

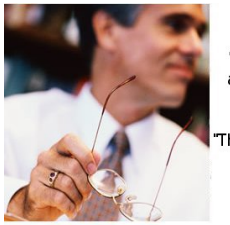
How much do you personally trust this investment fund to do what is right?



"The fund only selects companies that respect workers rights and help to protect the environment."

"The fund was profitable for nine out of ten years"

How much do you personally trust this investment fund to do what is right?



"The fund only selects companies that act in a competitive manner and have responsible supply chain politics"

"The fund was profitable for six out of ten years"

How much do you personally trust this investment fund to do what is right?

Figure 10.1: Materials used for the fund descriptions In Experiment 3 of section 1.

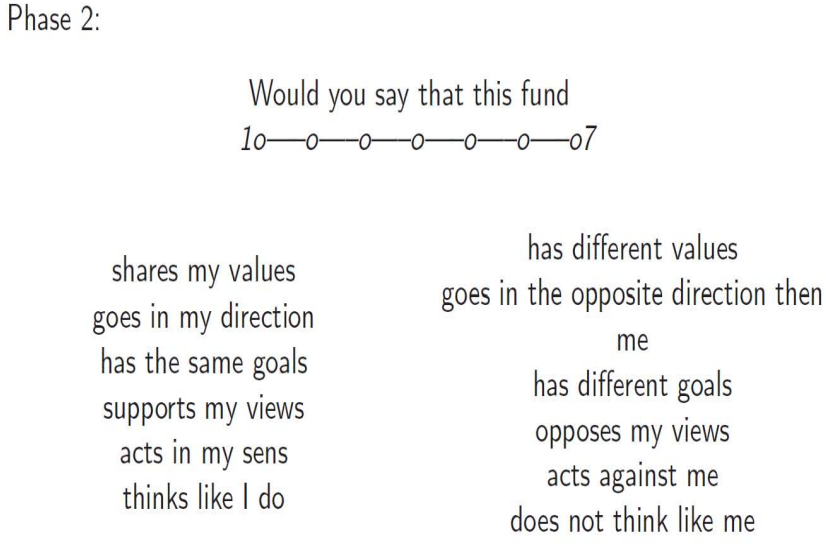


Figure 10.2: Value Similarity Scale used in Experiemnt 3

11

MATERIALS FROM SECTION 2

11.1 STUDY 1

For ecological reasons (materials make 30+ pages) they are provided as downloads at the following link: http://goo.gl/euwx1.If the link is no longer active please send an email to the author.

11.2 STUDY 2

For ecological reasons (materials make 100+ pages) they are provided as downloads at the following links: http://goo.gl/j280D and http://goo.gl/gsc12.

If the links are no longer active please send an email to the author.

12

MATERIALS FROM SECTION 3

12.1 MATERIALS FROM ONLINE EXPERIMENTS

For ecological reasons (materials make 30+ pages) they are provided as downloads at the following link: http://goo.gl/K9FQV.If the link is no longer active please send an email to the author.

12.2 MATERIALS FROM ON CAMPUS EXPERIMENT

Afin de nous permettre l'identification anonyme des réponses merci de noter vos initiales, votre année de naissance et les deux premières lettres de la rue ou vous habitez : __ ____ __ (ex. MH 1982 LE pour Manuel Hernandez née en 1982 résidant dans la rue Leclerc)

Bonjour,

Ce questionnaire a été élaboré dans le cadre d'une étude menée par des chercheurs de l'Université de Toulouse et de l'Université de Venise. Elle porte sur la prise de décision dans la situation d'un quizz de culture générale.

Vos réponses resteront strictement anonymes et seront uniquement exploitées à des fins académiques.

Pour nous, la précision et la sincérité de vos réponses sont cruciales à la qualité de ce travail. Nous vous remercions d'avance de votre aimable collaboration.

Vos gains lors de cette expérience sont des gains réels, que vous recevrez en espèces à la fin des passages. En plus des gains lors d'un jeu de culture générale, certaines personnes se verront offert un bonus personnel.

Pendant cette expérience vous allez jouer contre un autre participant à un quizz de culture générale. Pour assurer la qualité de notre étude il est important que vous ne connaissiez pas ce joueur. Sur votre place vous trouverez un cavalier sur lequel est inscrit votre numéro. Vous avez le numéro : _____

Votre adversaire a le numéro _____ inscrit sur le cavalier devant lui.

Est-ce que vous connaissez l'autre joueur ?

☐ Non ☐ Oui

(Si vous avez répondu oui à la question, merci de bien vouloir contacter l'organisateur du jeu pour jouer contre quelqu'un d'autre.)

Vous allez, maintenant jouer à un jeu de culture générale. Vous pouvez gagner 1€ à ce jeu si battez votre adversaire. Cela dit, si vous perdez vous gagnez 0€. Les règles du jeu sont les suivantes :

- Vous avez 5 minutes pour répondre à 12 questions de culture générale.
- Pour chacune des questions une seule des quatre réponses proposées est juste.
- Pour chaque bonne réponse vous recevez un point, pour une mauvaise réponse vous recevez 0 points.
- Si vous ne répondez pas ou si vous cochez plusieurs réponses, cela est compté comme une fausse réponse.
- Si deux joueurs sont ex aequo, des questions supplémentaires permettront de déterminer le vainqueur.

Qui est la partenaire de Mickey Rourke dans "9 semaines 1/2"?

☐ Kim Basinger
☐ Demi Moore
☐ Sharon Stone
☐ Brigitte Lahaye

Quel est le prénom de Machiavel, ce penseur de la Renaissance?

☐ Gianni
☐ Dieter
☐ Nicolas
☐ Esteban

De ces villes, laquelle n'est pas située en Allemagne ?

☐ Hambourg
☐ Mayence
☐ Diekirch
☐ Bonn

Comment appelle-t-on le plateau sur lequel on joue au jeu de go ?

☐ le plateau du Golan
☐ le «go est lent »
☐ le gobelet
☐ le Goban

Laquelle de ces propositions correspond à un empereur romain ?

☐ Sixte Débonnaire
☐ Quinte Charles
☐ Septime Sévère
☐ Quarte Datout

Qu'est-ce qu'une ancolie ?

☐ une partie de l'intestin
☐ une fleur
☐ une pierre précieuse
☐ une maladie

Comment s'appellent les barrettes métalliques qui séparent les notes sur les guitares ?

☐ des frettes
☐ des amplis
☐ des arpèges
☐ des médiators

Qui est l'inventeur de la solution sous vide pour perfusion ?

☐ le docteur Feelgood
☐ le docteur Knock
☐ le docteur Baxter
☐ le docteur Jivago

Comment s'appelle cette région d'Italie ?

☐ les Condruzes
☐ les Syracuses
☐ les Druzes
☐ les Abruzzes

Laquelle de ces propositions ne correspond pas à un nom médiatisé officiel et connu ?

☐ 20th Century Fox
☐ Route 66
☐ Ten Years After
☐ Schalke 05

Mélopée, ce nom correspond à …

☐ une des Muses
☐ un chant récitatif
☐ un sport olympique
☐ une spécialité culinaire de Cavaillon

Proroger une convention signifie …

☐ la signer
☐ la résilier
☐ la prolonger
☐ l'amender

Vous avez 1 minute pour répondre aux questions suivantes :

Qu'est-ce qu'un micocoulier ?

☐ un gastéropode
☐ un arbre
☐ un véhicule sous-marin
☐ une courbe de l'intestin

En achetant un Chris-Craft, on devient propriétaire …

☐ d'un bateau
☐ d'un avion
☐ d'une trottinette
☐ d'un vélo

Laquelle de ces parties du corps comporte une phalangine ?

☐ le cheveu
☐ le fémur
☐ la dent
☐ l'index

Laquelle de ces propositions désigne un guitariste célèbre ?

☐ Control
☐ Enter
☐ Slash
☐ Delete

Lequel de ces mots peut logiquement être associé au travail scientifique d'Auguste Piccard (1884-1962)?

☐ la plongée
☐ la myrtille
☐ le chocolat fourré aux noisettes
☐ le carnaval

Afin de nous permettre l'identification anonyme des réponses merci de noter vos initiales,
votre année de naissance et les deux premières lettres de la rue ou vous habitez : __ ____ __ (ex. MH 1982 LE pour Manuel Hernandez née en 1982 résidant dans la rue Leclerc)

Voici des phrases qui décrivent des comportements. Indiquez à chaque fois à quel point la phrase vous correspond. Décrivez-vous honnêtement, tel(le) que vous êtes, plutôt que comme vous aimeriez être. Lisez avec soin chaque phrase, et entourez la case **1** pour répondre « pas du tout », la case **2** pour répondre « Plutôt Non », la case **3** pour répondre « Je ne sais pas », la case **4** pour répondre « Plutôt Oui », ou la case **5** pour répondre « Tout à fait ».

Je m'intéresse aux autres.	1 2 3 4 5
Je compatis aux sentiments des autres.	1 2 3 4 5
J'insulte les gens.	1 2 3 4 5
J'ai le cœur tendre.	1 2 3 4 5
Je prends du temps pour les autres.	1 2 3 4 5
Je ne suis pas intéressé par les problèmes des autres.	1 2 3 4 5
Je ressens les émotions des autres.	1 2 3 4 5
Je mets les personnes à l'aise.	1 2 3 4 5
Je me fais peu de souci pour les autres.	1 2 3 4 5
Je pose des questions aux autres sur leur bien être.	1 2 3 4 5
Je sais comment réconforter les autres.	1 2 3 4 5
Je ne suis pas vraiment intéressé par les autres.	1 2 3 4 5
J'aime les enfants.	1 2 3 4 5
Je suis en bons termes avec à peu près tout le monde.	1 2 3 4 5
Je ne suis pas facile d'accès.	1 2 3 4 5
J'ai un mot gentil pour chacun.	1 2 3 4 5
Je montre ma gratitude.	1 2 3 4 5
Je suis indifférent aux sentiments des autres.	1 2 3 4 5
Je pense aux autres en premier.	1 2 3 4 5
J'aime aider les autres.	1 2 3 4 5

(Si vous avez terminé de répondre aux questions, merci de ne pas tourner la page et d'attendre les instructions de l'expérimentateur)

A

Pour la fin de cette étude nous nous intéressons à votre ressenti vis-à-vis à votre adversaire. Tenant compte de l'annonce des résultats merci de nous indiquer votre accord avec les déclarations qui suivent sur une échelle de « 1 je ne suis pas du tout d'accord » à « 7 je suis tout à fait d'accord ».

Je ressens de l'envie envers mon adversaire

Pas du tout o---o---o---o---o---o---o---o---o---o---o---o---o Tout à fait

Le gain de mon adversaire a beaucoup d'avantages pour lui

Pas du tout o---o---o---o---o---o---o---o---o---o---o---o---o Tout à fait

J'aurais bien aimé avoir son gain

Pas du tout o---o---o---o---o---o---o---o---o---o---o---o---o Tout à fait

Quand je pense au gain de mon adversaire je me sens moins bien

Pas du tout o---o---o---o---o---o---o---o---o---o---o---o---o Tout à fait

Merci beaucoup d'avoir participé a cette étude et n'oubliez pas de signer le reçu avant de partir.

A

Le score de l'autre joueur est supérieur au votre. En conséquence votre gain est de 0,00€ et celui de votre adversaire est de 1,00€.

Cependant, nous avons décidé de vous offrir un bonus supplémentaire. Vous devez choisir entre :

1. Recevoir 1,00€, devant l'autre joueur. C'est-à-dire que au lieu de 0,00€ vous recevez 1,00€ et le résultat annoncé à l'autre joueur sera : « *Vous avez donné plus de bonnes réponses que l'autre joueur. Votre gain est de 1,00€ celui de l'autre joueur est de 1,00€.* »
2. Recevoir 2,00€, sans que nous le disions à l'autre joueur. C'est-à-dire que au lieu de 0,00€ vous recevez 2,00€ et le résultat annoncé à l'autre joueur sera : « *Vous avez donné plus de bonnes réponses que l'autre joueur. Votre gain est de 1,00€ celui de l'autre joueur est de 0,00€.* »

Quel est votre choix ?

□ Le choix 1 (Gain public) □ Le choix 2 (Gain privé)

B

Afin de nous permettre l'identification anonyme des réponses merci de noter vos initiales, votre année de naissance et les deux premières lettres de la rue ou vous habitez : __ ____ __ (ex. MH 1982 LE pour Manuel Hernandez née en 1982 résidant dans la rue Leclerc)

Merci de nous indiquer votre accord avec les déclarations qui suivent sur une échelle de « 1 je ne suis pas du tout d'accord » à « 10 je suis tout à fait d'accord ».

Mon adversaire ressent de l'envie envers moi !

Pas du tout o---o---o---o---o---o---o---o---o---o---o Tout à fait

Mon adversaire pense que mon gain a beaucoup d'avantages pour moi !

Pas du tout o---o---o---o---o---o---o---o---o---o---o Tout à fait

Mon adversaire aurait bien aimé avoir mon gain !

Pas du tout o---o---o---o---o---o---o---o---o---o---o Tout à fait

Quand mon adversaire pense à mon gain il se sent surement moins bien !

Pas du tout o---o---o---o---o---o---o---o---o---o---o Tout à fait

Le score de l'autre joueur est supérieur au votre. En conséquence votre gain est de 0,00€ et celui de votre adversaire est de 1,00€.

Cependant, nous avons décidé de vous offrir un bonus supplémentaire. Vous devez choisir entre :

1. Recevoir 10,00€, devant l'autre joueur. C'est-à-dire que au lieu de 0,00€ vous recevez 10,00€ et le résultat annoncé à l'autre joueur sera : « *Vous avez donné plus de bonnes réponses que l'autre joueur. Votre gain est de 1,00€ celui de l'autre joueur est de 10,00€.* »
2. Recevoir 2,00€, sans que nous le disions à l'autre joueur. C'est-à-dire que au lieu de 0,00€ vous recevez 2,00€ et le résultat annoncé à l'autre joueur sera : « *Vous avez donné plus de bonnes réponses que l'autre joueur. Votre gain est de 1,00€ celui de l'autre joueur est de 0,00€.* »

Quel est votre choix ?

□ Le choix 1 (Gain public) □ Le choix 2 (Gain privé)

Pour la fin de cette étude nous nous intéressons à votre ressenti vis-à-vis à votre adversaire. **Tenant compte de l'annonce des résultats** merci de nous indiquer votre accord avec les déclarations qui suivent sur une échelle de « 1 je ne suis pas du tout d'accord » à « 10 je suis tout à fait d'accord ».

Mon adversaire ressent de l'envie envers moi !

Pas du tout o---o---o---o---o---o---o---o---o---o Tout à fait

Mon adversaire pense que mon gain a beaucoup d'avantages pour moi !

Pas du tout o---o---o---o---o---o---o---o---o---o Tout à fait

Mon adversaire aurait bien aimé avoir mon gain !

Pas du tout o---o---o---o---o---o---o---o---o---o Tout à fait

Quand mon adversaire pense à mon gain il se sent surement moins bien !

Pas du tout o---o---o---o---o---o---o---o---o---o Tout à fait

Merci beaucoup d'avoir participé a cette étude et n'oubliez pas de signer le reçu avant de partir.

Afin de nous permettre l'identification anonyme des réponses merci de noter vos initiales, votre année de naissance et les deux premières lettres de la rue ou vous habitez : __ ____ __ (ex. MH 1982 LE pour Manuel Hernandez née en 1982 résidant dans la rue Leclerc)

Le score de l'autre joueur est supérieur au votre. En conséquence votre gain est de 0,00€ et celui de votre adversaire est de 1,00€.

Cependant, nous avons décidé de vous offrir un bonus supplémentaire. Vous devez choisir entre :

1. Recevoir 2,00€, devant l'autre joueur. C'est-à-dire que au lieu de 0,00€ vous recevez 2,00€ et le résultat annoncé à l'autre joueur sera : « *Vous avez donné plus de bonnes réponses que l'autre joueur. Votre gain est de 1,00€ celui de l'autre joueur est de 2,00€.* »
2. Recevoir 2,00€, sans que nous le disions à l'autre joueur. C'est-à-dire que au lieu de 0,00€ vous recevez 2,00€ et le résultat annoncé à l'autre joueur sera : « *Vous avez donné plus de bonnes réponses que l'autre joueur. Votre gain est de 1,00€ celui de l'autre joueur est de 0,00€.* »

Quel est votre choix ?

□ Le choix 1 (Gain public) □ Le choix 2 (Gain privé)

B2

Pour la fin de cette étude nous nous intéressons à votre ressenti vis-à-vis à votre adversaire. **Tenant compte de l'annonce des résultats** merci de nous indiquer votre accord avec les déclarations qui suivent sur une échelle de « 1 je ne suis pas du tout d'accord » à « 10 je suis tout à fait d'accord ».

Mon adversaire ressent de l'envie envers moi !

Pas du tout o---o---o---o---o---o---o---o---o---o Tout à fait

Mon adversaire pense que mon gain a beaucoup d'avantages pour moi !

Pas du tout o---o---o---o---o---o---o---o---o---o Tout à fait

Mon adversaire aurait bien aimé avoir mon gain !

Pas du tout o---o---o---o---o---o---o---o---o---o Tout à fait

Quand mon adversaire pense à mon gain il se sent surement moins bien !

Pas du tout o---o---o---o---o---o---o---o---o---o Tout à fait

Merci beaucoup d'avoir participé a cette étude et n'oubliez pas de signer le reçu avant de partir.

13

SCRIPTS SECTION 1

13.1 DATA

Data and Scripts used for Data Analysis and Visualization. All data is provided in a compressed file which can be downloaded at the following link: https://dl.dropbox.com/u/2877944/ThesisData.zip

13.2 EXPERIMENT 1

```
#Analysis of EX1
summary(EX1)

require(plyr)

require(outliers)

rm.outlier(EX1$Trust, fill =TRUE)

## ANOVA
require(MASS) ##
require(nlme) ## for lme()
require(multcomp) ## for multiple comparison
summary(mod.ex1 <- aov(Trust ~ Sim*Perf + Error(
    subject/Sim), data = EX1))
Lme.mod <- lme(Trust ~ Sim + Perf, random = ~1 |
    subject/Sim, data = EX1)
anova(Lme.mod)
summary(Lme.mod)
summary(glht(Lme.mod, linfct=mcp(Sim="Tukey"))) #
    Differences Similarity
summary(glht(Lme.mod, linfct=mcp(Perf="Tukey"))) #
    Differences Performance
```

```
## Norm data within specified groups in a data frame; it normalizes each
## subject (identified by idvar) so that they have the same mean, within each group
## specified by betweenvars.
normDataWithin <- function(data=NULL, idvar, measurevar, betweenvars=NULL,
                           na.rm=FALSE, .drop=TRUE) {
  require(plyr)

  # Measure var on left, idvar + between vars on right of formula.
  data.subjMean <- ddply(data, c(idvar, betweenvars), .drop=.drop,
                         .fun = function(xx, col, na.rm) {
                           c(subjMean = mean(xx[,col], na.rm=na.rm))
                         },
                         measurevar,
                         na.rm
  )

  # Put the subject means with original data
  data <- merge(data, data.subjMean)

  # Get the normalized data in a new column
  measureNormedVar <- paste(measurevar, "_norm", sep="")
  data[,measureNormedVar] <- data[,measurevar] - data[,"subjMean"] +
    mean(data[,measurevar], na.rm=na.rm)

  # Remove this subject mean column
  data$subjMean <- NULL

  return(data)
}



## Summarizes data, handling within-subjects variables by removing inter-subject variability.
## It will still work if there are no within-S variables.
## Gives count, un-normed mean, normed mean (with same between-group mean),
##   standard deviation, standard error of the mean, and confidence interval.
```

```
## If there are within-subject variables, calculate adjusted values using method from Morey (2008).
##   data: a data frame.
##   measurevar: the name of a column that contains the variable to be summariezed
##   betweenvars: a vector containing names of columns that are between-subjects variables
##   withinvars: a vector containing names of columns that are within-subjects variables
##   idvar: the name of a column that identifies each subject (or matched subjects)
##   na.rm: a boolean that indicates whether to ignore NA's
##   conf.interval: the percent range of the confidence interval (default is 95%)
summarySEwithin <- function(data=NULL, measurevar, betweenvars=NULL, withinvars=NULL,
                            idvar=NULL, na.rm=FALSE, conf.interval=.95, .drop=TRUE) {

  # Ensure that the betweenvars and withinvars are factors
  factorvars <- vapply(data[, c(betweenvars, withinvars), drop=FALSE],
                       FUN=is.factor, FUN.VALUE=logical(1))

  if (!all(factorvars)) {
    nonfactorvars <- names(factorvars)[!factorvars]
    message("Automatically converting the following non-factors to factors: ",
            paste(nonfactorvars, collapse = ", "))
    data[nonfactorvars] <- lapply(data[nonfactorvars], factor)
  }

  # Get the means from the un-normed data
  datac <- summarySE(data, measurevar, groupvars=c(betweenvars, withinvars),
                     na.rm=na.rm, conf.interval=conf.interval, .drop=.drop)

  # Drop all the unused columns (these will be calculated with normed data)
  datac$sd <- NULL
  datac$se <- NULL
  datac$ci <- NULL

  # Norm each subject's data
```

```
  ndata <- normDataWithin(data, idvar, measurevar,
      betweenvars, na.rm, .drop=.drop)

  # This is the name of the new column
  measurevar_n <- paste(measurevar, "_norm", sep="")

  # Collapse the normed data - now we can treat
      between and within vars the same
  ndatac <- summarySE(ndata, measurevar_n, groupvars
      =c(betweenvars, withinvars),
                      na.rm=na.rm, conf.interval=
                          conf.interval, .drop=.drop)

  # Apply correction from Morey (2008) to the
      standard error and confidence interval
  #  Get the product of the number of conditions of
      within-S variables
  nWithinGroups    <- prod(vapply(ndatac[,withinvars
      , drop=FALSE], FUN=nlevels,
                                  FUN.VALUE=numeric
                                      (1)))
  correctionFactor <- sqrt( nWithinGroups / (
      nWithinGroups-1) )

  # Apply the correction factor
  ndatac$sd <- ndatac$sd * correctionFactor
  ndatac$se <- ndatac$se * correctionFactor
  ndatac$ci <- ndatac$ci * correctionFactor

  # Combine the un-normed means with the normed
      results
  merge(datac, ndatac)
}

EX1sum <- summarySEwithin(EX1, measurevar="Trust",
    withinvars=c("Sim","Perf"), idvar="subject")

#order Sim factors
EX1sum$Sim<-factor(EX1sum$Sim, levels=c("High","
    Control","Low"))


require(ggplot2)

ggplot(EX1sum, aes(x=Sim, y=Trust, fill=Perf)) +
  geom_bar(position=position_dodge(.9), colour="
      black", stat="identity") +
  geom_errorbar(position=position_dodge(.9), width
      =.25, aes(ymin=Trust-se, ymax=Trust+se)) +
  coord_cartesian(ylim=c(0,10)) +
  scale_y_continuous(breaks=seq(1:10)) +
```

```
  theme_bw() +
  geom_hline(yintercept=5.612, linetype="dotted") +
  theme(legend.position="top") +
  theme(legend.title = element_text(colour="black",
     size=12, face="bold"))+
  theme(axis.title.x = element_text(face="bold",
     colour="black", size=12))+
  theme(axis.title.y = element_text(face="bold",
     colour="black", size=14))+
  theme(strip.text.x = element_text())+
  ylab("Trustworthiness")+
  xlab("Value Similarity")+
  scale_fill_discrete(name="Financial \nPerformance"
     )
```

13.3 EXPERIMENT 2

```
summary(EX2)

require(outliers)

rm.outlier(EX2$Trust, fill =TRUE)


## ANOVA
require(MASS) ##
require(nlme) ## for lme()
require(multcomp) ## for multiple comparison
summary(mod.ex2 <- aov(Trust ~ Sim*Label + Error(
   subject/(Sim*Label)), data=EX2))
Lme.mod <- lme(Trust ~ Sim + Label, random = ~1 |
   subject/Sim, data = EX2)
anova(Lme.mod)
summary(Lme.mod)
summary(glht(Lme.mod, linfct=mcp(Sim="Tukey"))) #
   Differences Similarity
summary(glht(Lme.mod, linfct=mcp(Label="Tukey"))) #
   Differences Performance



## Norm data within specified groups in a data frame
   ; it normalizes each
## subject (identified by idvar) so that they have
   the same mean, within each group
## specified by betweenvars.
normDataWithin <- function(data=NULL, idvar,
   measurevar, betweenvars=NULL,
```

```
                                  na.rm=FALSE, .drop=TRUE)
                                      {
  require(plyr)

  # Measure var on left, idvar + between vars on
      right of formula.
  data.subjMean <- ddply(data, c(idvar, betweenvars)
      , .drop=.drop,
                         .fun = function(xx, col, na
                             .rm) {
                           c(subjMean = mean(xx[,col
                               ], na.rm=na.rm))
                         },
                         measurevar,
                         na.rm
  )

  # Put the subject means with original data
  data <- merge(data, data.subjMean)

  # Get the normalized data in a new column
  measureNormedVar <- paste(measurevar, "_norm", sep
      ="")
  data[,measureNormedVar] <- data[,measurevar] -
      data[,"subjMean"] +
    mean(data[,measurevar], na.rm=na.rm)

  # Remove this subject mean column
  data$subjMean <- NULL

  return(data)
}

## Summarizes data, handling within-subjects
    variables by removing inter-subject variability.
## It will still work if there are no within-S
    variables.
## Gives count, un-normed mean, normed mean (with
    same between-group mean),
##   standard deviation, standard error of the mean,
     and confidence interval.
## If there are within-subject variables, calculate
    adjusted values using method from Morey (2008).
##   data: a data frame.
##   measurevar: the name of a column that contains
    the variable to be summariezed
##   betweenvars: a vector containing names of
    columns that are between-subjects variables
##   withinvars: a vector containing names of
    columns that are within-subjects variables
```

```
##   idvar: the name of a column that identifies each subject (or matched subjects)
##   na.rm: a boolean that indicates whether to ignore NA's
##   conf.interval: the percent range of the confidence interval (default is 95%)
summarySEwithin <- function(data=NULL, measurevar, betweenvars=NULL, withinvars=NULL,
                            idvar=NULL, na.rm=FALSE, conf.interval=.95, .drop=TRUE) {

  # Ensure that the betweenvars and withinvars are factors
  factorvars <- vapply(data[, c(betweenvars, withinvars), drop=FALSE],
                       FUN=is.factor, FUN.VALUE=logical(1))

  if (!all(factorvars)) {
    nonfactorvars <- names(factorvars)[!factorvars]
    message("Automatically converting the following non-factors to factors: ",
            paste(nonfactorvars, collapse = ", "))
    data[nonfactorvars] <- lapply(data[nonfactorvars], factor)
  }

  # Get the means from the un-normed data
  datac <- summarySE(data, measurevar, groupvars=c(betweenvars, withinvars),
                     na.rm=na.rm, conf.interval=conf.interval, .drop=.drop)

  # Drop all the unused columns (these will be calculated with normed data)
  datac$sd <- NULL
  datac$se <- NULL
  datac$ci <- NULL

  # Norm each subject's data
  ndata <- normDataWithin(data, idvar, measurevar, betweenvars, na.rm, .drop=.drop)

  # This is the name of the new column
  measurevar_n <- paste(measurevar, "_norm", sep="")

  # Collapse the normed data - now we can treat between and within vars the same
  ndatac <- summarySE(ndata, measurevar_n, groupvars=c(betweenvars, withinvars),
```

```
                        na.rm=na.rm, conf.interval=
                            conf.interval, .drop=.drop)

  # Apply correction from Morey (2008) to the
      standard error and confidence interval
  #  Get the product of the number of conditions of
      within-S variables
  nWithinGroups    <- prod(vapply(ndatac[,withinvars
      , drop=FALSE], FUN=nlevels,
                                    FUN.VALUE=numeric
                                        (1)))
  correctionFactor <- sqrt( nWithinGroups / (
      nWithinGroups-1) )

  # Apply the correction factor
  ndatac$sd <- ndatac$sd * correctionFactor
  ndatac$se <- ndatac$se * correctionFactor
  ndatac$ci <- ndatac$ci * correctionFactor

  # Combine the un-normed means with the normed
      results
  merge(datac, ndatac)
}

EX2sum <- summarySEwithin(EX2, measurevar="Trust",
    withinvars=c("Sim","Label"), idvar="subject")

EX2sum$Sim <- factor(EX2sum$Sim, levels = c("Small",
     "Moderate", "Large"))
EX2sum$Label <- factor(EX2sum$Label, levels = c("
    Ethical","Conventional"))
require(ggplot2)

ggplot(EX2sum, aes(x=Sim, y=Trust, fill=Label)) +
  geom_bar(position=position_dodge(.9), colour="
      black", stat="identity") +
  geom_errorbar(position=position_dodge(.9), width
      =.25, aes(ymin=Trust-se, ymax=Trust+se)) +
  coord_cartesian(ylim=c(3,7)) +
  scale_y_continuous(breaks=seq(1:10)) +
  theme_bw() +
  geom_hline(yintercept=5.502, linetype="dotted") +
  theme(legend.position="top") +
  theme(legend.title = element_text(colour="black",
      size=12, face="bold"))+
  theme(axis.title.x = element_text(face="bold",
      colour="black", size=12))+
  theme(axis.title.y = element_text(face="bold",
      colour="black", size=14))+
  theme(strip.text.x = element_text())+
  ylab("Trustworthiness")+
```

```
130   xlab("Value Similarity")+
      scale_fill_discrete(name="Label")
```

13.4 EXPERIMENT 3

```
1   #Analysis of EX3
    summary(EX3)
3
    require(outliers)
5
    rm.outlier(EX3$Trust, fill =TRUE)
7   rm.outlier(EX3$SimScale, fill=TRUE)


9
    #Anova on experimental desigsn Similarity (3) *
       Performance(2)
11  summary(aov.ex3 <- aov(Trust ~ Perf*Sim + Error(
       subject/(Perf*Sim)), data=EX3))
    summary(aov2.ex3 <- aov(Trust ~ValueSet + Error(
       subject/ValueSet), data = EX3))
13


15  ##define Norm dat within function
    function(data=NULL, idvar, measurevar, betweenvars=
       NULL,
17           na.rm=FALSE, .drop=TRUE) {
      require(plyr)
19
      # Measure var on left, idvar + between vars on
         right of formula.
21    data.subjMean <- ddply(data, c(idvar, betweenvars)
         , .drop=.drop,
                             .fun = function(xx, col, na
                                .rm) {
23                             c(subjMean = mean(xx[,col
                                  ], na.rm=na.rm))
                             },
25                           measurevar,
                             na.rm
27    )

29    # Put the subject means with original data
      data <- merge(data, data.subjMean)
31
      # Get the normalized data in a new column
33    measureNormedVar <- paste(measurevar, "_norm", sep
         ="")
```

```
  data[,measureNormedVar] <- data[,measurevar] -
      data[,"subjMean"] +
    mean(data[,measurevar], na.rm=na.rm)

  # Remove this subject mean column
  data$subjMean <- NULL

  return(data)
}


##Summarize data according to within subject factor
    design
## SummarySEwithin funciton
function(data=NULL, measurevar, betweenvars=NULL,
    withinvars=NULL,
          idvar=NULL, na.rm=FALSE, conf.interval=.95,
              .drop=TRUE) {

  # Ensure that the betweenvars and withinvars are
      factors
  factorvars <- vapply(data[, c(betweenvars,
      withinvars), drop=FALSE],
                       FUN=is.factor, FUN.VALUE=
                           logical(1))

  if (!all(factorvars)) {
    nonfactorvars <- names(factorvars)[!factorvars]
    message("Automatically converting the following
        non-factors to factors: ",
            paste(nonfactorvars, collapse = ", "))
    data[nonfactorvars] <- lapply(data[nonfactorvars
        ], factor)
  }

  # Get the means from the un-normed data
  datac <- summarySE(data, measurevar, groupvars=c(
      betweenvars, withinvars),
                     na.rm=na.rm, conf.interval=conf
                         .interval, .drop=.drop)

  # Drop all the unused columns (these will be
      calculated with normed data)
  datac$sd <- NULL
  datac$se <- NULL
  datac$ci <- NULL

  # Norm each subject's data
  ndata <- normDataWithin(data, idvar, measurevar,
      betweenvars, na.rm, .drop=.drop)

```

```
  # This is the name of the new column
  measurevar_n <- paste(measurevar, "_norm", sep="")

  # Collapse the normed data - now we can treat
     between and within vars the same
  ndatac <- summarySE(ndata, measurevar_n, groupvars
     =c(betweenvars, withinvars),
                      na.rm=na.rm, conf.interval=
                         conf.interval, .drop=.drop)

  # Apply correction from Morey (2008) to the
     standard error and confidence interval
  #  Get the product of the number of conditions of
     within-S variables
  nWithinGroups    <- prod(vapply(ndatac[,withinvars
     , drop=FALSE], FUN=nlevels,
                                  FUN.VALUE=numeric
                                     (1)))
  correctionFactor <- sqrt( nWithinGroups / (
     nWithinGroups-1) )

  # Apply the correction factor
  ndatac$sd <- ndatac$sd * correctionFactor
  ndatac$se <- ndatac$se * correctionFactor
  ndatac$ci <- ndatac$ci * correctionFactor

  # Combine the un-normed means with the normed
     results
  merge(datac, ndatac)
}


## Plot of experiemntal design that is not in the
   manuscript


EX3sum <- summarySEwithin(EX3, measurevar="Trust",
   withinvars=c("Sim","Perf"), idvar="subject")

require(ggplot2)
ggplot(EX3sum, aes(x=Sim, y=Trust, fill=Perf)) +
  geom_bar(position=position_dodge(.9), colour="
     black", stat="identity") +
  geom_errorbar(position=position_dodge(.9), width
     =.25, aes(ymin=Trust-se, ymax=Trust+se)) +
  coord_cartesian(ylim=c(6,8)) +
  scale_y_continuous(breaks=seq(1:10)) +
  theme_bw() +
  geom_hline(yintercept=7.248, linetype="dotted") +
  theme(legend.position="top") +
```

```
  theme(legend.title = element_text(colour="black",
     size=12, face="bold"))+
  theme(axis.title.x = element_text(face="bold",
     colour="black", size=12))+
  theme(axis.title.y = element_text(face="bold",
     colour="black", size=14))+
  theme(strip.text.x = element_text())+
  ylab("Trustworthiness")+
  xlab("Value Similarity")+
  scale_fill_discrete(name="Finanacial \nPerformance
     ")


#mediation analysis was performed in SPSS using
   Preacher and Hayes "mediate" macro
# Regression Graph

library(ggplot2)
library(MASS)
EX3$Trustworthiness=11-EX3$Trust

# H L M -> L M H

# (L) Competitiveness & Supply Chain
# (M) Transparency & Conformity to laws
# (H) Workers rights & Environment

EX3$Intercept <- c(rep(7.06, 230), rep(7.29, 230),
   rep(7.38, 230))

EX3$ValueSet <- factor(EX3$Sim, labels = c("Workers
    rights & Environment","Competitiveness & Supply
    Chain","Transparency & Conformity to laws"))

ggplot(EX3, aes(x=SimScale, y=Trust, color=Perf)) +
  scale_color_manual(values=c("firebrick3","
     royalblue3"), name="Financial \nPerformance")+
  facet_grid(.~ValueSet) +
  geom_point(size=2, alpha=0.5, shape=19, position=
     position_jitter(width=.15, height=.15))+
  stat_smooth(method="rlm", size=1) +
  scale_x_continuous("Value Similarity")+
  theme(legend.position="top", aspect.ratio=1.7/1)+
  theme(legend.title = element_text(colour="black",
     size=12, face="bold"))+
  theme(axis.title.x = element_text(face="bold",
     colour="black", size=12))+
  theme(axis.title.y = element_text(face="bold",
     colour="black", size=14))+
  theme(strip.text.x = element_text())+
```

```
  geom_hline(aes(yintercept = Intercept), linetype="
      dashed")
```

```
#load required packages before running the code
    below
require(mediation)
require(plyr)
require(boot)
require(car)
require(effects)


### Mediation

# Dependent, Independent, and Proposed Mediator
    Variables:
# DV (Y) =   CREATIV
# IV (X) =   LEADER
# MEDS (M) = EFFICACY
#
# Statistical Controls:
# CONTROL= AGE
# SEX
# DIPLOMA
# DEPART
# SUPTENUR

#IV to Mediators (a paths)
summary(mod.m <- lm(Similarity ~ Values , EX3))  ##
    estimate m model
#Direct Effects of Mediators on DV (b paths)
#Direct Effect of IV on DV (c-prime path)
#Partial Effect of Control Variables on DV
#Model Summary for DV Model
summary(mod.y <- lm(Trust ~ Similarity + Values, EX3
    ))  ##estimate y model
#Total Effect of IV on DV (c path)
summary(mod.c <- lm(Trust ~ Values, EX3))

#Indirect Effects of IV on DV through Proposed
    Mediators (ab paths)
#             Data      boot      Bias        SE
#EFFICACY     ,0314     ,0270    -,0044     ,0261
# Bias Corrected and Accelerated Confidence
    Intervals
#               Lower     Upper
# EFFICACY    -,0039     ,1089

#carefully inspect ?mediate for details
```

```
#although not recommended, 'T' acts for 'TRUE' and 'F' acts for 'FALSE'
med_a <- mediate(mod.m, mod.y, treat='Values',
   mediator='Similarity',
                 boot=T, sims=50)  ##supply m and y models for mediation analysis
summary(med_a)
#to properly view the graph, maximize the Plots pane or 'Zoom'
plot(med_a)

#a*b=0.0314
(med_axb <- as.numeric(coef(mod.m)['Values'] * coef(mod.y)['Similarity'])) #Data
med_a$d0
mean(med_a$d0.sims) #boot: average coefficient from bootstraps
#estimate bias using the bootstrap draws contained in the output (d0.sims, etc) as
(d0.bias <- mean(med_a$d0.sim) - med_a$d0)
sd(as.vector(med_a$d0.sims)) #SE
#med_a$d0 - med_axb #bias
```

14

SCRIPTS SECTION 2

14.1 EXECUTIVE COMPENSATION PLANS

Statistica Workbooks and R-Scripts used for Data Analysis and Visualization. Significance analysis and visualization was performed using Statistica software. The "Workbook" file is are provided as download at the following link: https://dl.dropbox.com/u/2877944/Compensaiton1.stw

14.2 COMPENSATION POLICIES

```
summary(EX1)

require(plyr)

EX1s<-EX1
require(outliers)
rm.outlier(EX1$Acceptability, fill =TRUE)

##Norm data within
## Norms the data within specified groups in a data frame; it normalizes each
## subject (identified by idvar) so that they have the same mean, within each group
## specified by betweenvars.
##   data: a data frame.
##   idvar: the name of a column that identifies each subject (or matched subjects)
##   measurevar: the name of a column that contains the variable to be summariezed
##   betweenvars: a vector containing names of columns that are between-subjects variables
##   na.rm: a boolean that indicates whether to ignore NA's
```

```
normDataWithin <- function(data=NULL, idvar,
    measurevar, betweenvars=NULL,
                               na.rm=FALSE, .drop=TRUE)
                                   {
  require(plyr)

  # Measure var on left, idvar + between vars on
      right of formula.
  data.subjMean <- ddply(data, c(idvar, betweenvars)
      , .drop=.drop,
                           .fun = function(xx, col, na
                               .rm) {
                             c(subjMean = mean(xx[,col
                                 ], na.rm=na.rm))
                           },
                           measurevar,
                           na.rm
  )

  # Put the subject means with original data
  data <- merge(data, data.subjMean)

  # Get the normalized data in a new column
  measureNormedVar <- paste(measurevar, "_norm", sep
      ="")
  data[,measureNormedVar] <- data[,measurevar] -
      data[,"subjMean"] +
    mean(data[,measurevar], na.rm=na.rm)

  # Remove this subject mean column
  data$subjMean <- NULL

  return(data)
}

## Summarizes data, handling within-subjects
    variables by removing inter-subject variability.
## It will still work if there are no within-S
    variables.
## Gives count, un-normed mean, normed mean (with
    same between-group mean),
##   standard deviation, standard error of the mean,
     and confidence interval.
## If there are within-subject variables, calculate
    adjusted values using method from Morey (2008).
##   data: a data frame.
##   measurevar: the name of a column that contains
    the variable to be summariezed
##   betweenvars: a vector containing names of
    columns that are between-subjects variables
```

```
##   withinvars: a vector containing names of columns that are within-subjects variables
##   idvar: the name of a column that identifies each subject (or matched subjects)
##   na.rm: a boolean that indicates whether to ignore NA's
##   conf.interval: the percent range of the confidence interval (default is 95%)
summarySEwithin <- function(data=NULL, measurevar, betweenvars=NULL, withinvars=NULL,
                            idvar=NULL, na.rm=FALSE, conf.interval=.95, .drop=TRUE) {

  # Ensure that the betweenvars and withinvars are factors
  factorvars <- vapply(data[, c(betweenvars, withinvars), drop=FALSE],
                       FUN=is.factor, FUN.VALUE=logical(1))

  if (!all(factorvars)) {
    nonfactorvars <- names(factorvars)[!factorvars]
    message("Automatically converting the following non-factors to factors: ",
            paste(nonfactorvars, collapse = ", "))
    data[nonfactorvars] <- lapply(data[nonfactorvars], factor)
  }

  # Get the means from the un-normed data
  datac <- summarySE(data, measurevar, groupvars=c(betweenvars, withinvars),
                     na.rm=na.rm, conf.interval=conf.interval, .drop=.drop)

  # Drop all the unused columns (these will be calculated with normed data)
  datac$sd <- NULL
  datac$se <- NULL
  datac$ci <- NULL

  # Norm each subject's data
  ndata <- normDataWithin(data, idvar, measurevar, betweenvars, na.rm, .drop=.drop)

  # This is the name of the new column
  measurevar_n <- paste(measurevar, "_norm", sep="")

  # Collapse the normed data - now we can treat between and within vars the same
```

```
  ndatac <- summarySE(ndata, measurevar_n, groupvars=c(betweenvars, withinvars),
                      na.rm=na.rm, conf.interval=conf.interval, .drop=.drop)

  # Apply correction from Morey (2008) to the standard error and confidence interval
  #  Get the product of the number of conditions of within-S variables
  nWithinGroups    <- prod(vapply(ndatac[,withinvars, drop=FALSE], FUN=nlevels,
                                  FUN.VALUE=numeric(1)))
  correctionFactor <- sqrt( nWithinGroups / (nWithinGroups-1) )

  # Apply the correction factor
  ndatac$sd <- ndatac$sd * correctionFactor
  ndatac$se <- ndatac$se * correctionFactor
  ndatac$ci <- ndatac$ci * correctionFactor

  # Combine the un-normed means with the normed results
  merge(datac, ndatac)
}

## Summarizes data.
## Gives count, mean, standard deviation, standard error of the mean, and confidence interval (default 95%).
##   data: a data frame.
##   measurevar: the name of a column that contains the variable to be summariezed
##   groupvars: a vector containing names of columns that contain grouping variables
##   na.rm: a boolean that indicates whether to ignore NA's
##   conf.interval: the percent range of the confidence interval (default is 95%)
summarySE <- function(data=NULL, measurevar, groupvars=NULL, na.rm=FALSE,
                      conf.interval=.95, .drop=TRUE) {
  require(plyr)

  # New version of length which can handle NA's: if na.rm==T, don't count them
  length2 <- function (x, na.rm=FALSE) {
    if (na.rm) sum(!is.na(x))
    else       length(x)
  }
```

```
121
    # This is does the summary; it's not easy to
        understand...
123 datac <- ddply(data, groupvars, .drop=.drop,
                   .fun= function(xx, col, na.rm) {
125                  c( N    = length2(xx[,col], na.rm
                        =na.rm),
                        mean = mean   (xx[,col], na.rm
                           =na.rm),
127                     sd   = sd     (xx[,col], na.rm
                           =na.rm)
                     )
129                },
                   measurevar,
131                na.rm
    )
133
    # Rename the "mean" column
135 datac <- rename(datac, c("mean"=measurevar))

137 datac$se <- datac$sd / sqrt(datac$N)  # Calculate
        standard error of the mean

139 # Confidence interval multiplier for standard
        error
    # Calculate t-statistic for confidence interval:
141 # e.g., if conf.interval is .95, use .975 (above/
        below), and use df=N-1
    ciMult <- qt(conf.interval/2 + .5, datac$N-1)
143 datac$ci <- datac$se * ciMult

145 return(datac)
}
147
EX1sum <- summarySEwithin(EX1s, measurevar="
    Acceptability", withinvars=c("Special","
    Transparency", "Amount", "Extent"), idvar="
    subject")
149
require(ggplot2)
151
EX1sum$Transparency<-factor(EX1sum$Transparency,
    levels=c("Clear","Obscure","Arbitrary"))
153 EX1sum$Amount<-factor(EX1sum$Amount, levels=c("3
    month","1 month"))
EX1sum$Special<-factor(EX1sum$Special, levels=c("3
    month special","1 month special", "No special"))
155
```

```
qplot(Transparency, Acceptability, data = EX1sum,
    group = Special, colour= Special, facets = Extent
    ~Amount, geom="line")+
  geom_point() + geom_errorbar(aes(ymin=
      Acceptability-se, ymax=Acceptability+se), width
      =.1, size=.3, position=position_dodge())+
  facet_wrap(Extent~Amount, nrow=1)+
  scale_fill_manual(values=c("#CCCCCC","#FFFFFF")) +
  coord_cartesian(ylim=c(0,10)) +
  scale_y_continuous(breaks=seq(1:10)) +
  theme_bw() +
  geom_hline(yintercept=5.54, linetype="dashed") +
  theme(legend.position="top") +
  theme(legend.title = element_text(colour="black",
      size=12, face="bold"))+
  theme(axis.title.x = element_text(face="bold",
      colour="black", size=12))+
  theme(axis.title.y = element_text(face="bold",
      colour="black", size=14))

EX1sumClu <- summarySEwithin(EX1s, measurevar="
    Acceptability", betweenvars="Cluster", withinvars
    =c("Special","Transparency", "Amount", "Extent"),
     idvar="subject")

## Ask for Cluster means \\\ require(plyr)
ddply(EX1s,~Cluster,summarise,mean=mean(
    Acceptability),sd=sd(Acceptability))

## manually define the Intercepts for each cluster
EX1sumClu$Intercept <- c(rep(5.91, 36), rep(3.88,
    36), rep(7.63, 36), rep(4.8, 36))

##Reorder Procedure levels
EX1sumClu$Transparency<-factor(EX1sumClu$
    Transparency, levels=c("Clear","Obscure", "
    Arbitrary"))

##Order Cluster levels
EX1sumClu$Cluster<-factor(EX1sumClu$Cluster, levels=
    c("3","1","4", "2"))

#Order Special
EX1sumClu$Special<-factor(EX1sumClu$Special, levels=
    c("3 month special","1 month special", "No
    special"))


#Create Cluster factor for names display
EX1sumClu$Cluster1 <- factor(c(rep("'Rather
    Acceptable'", 36), rep("'Rather unacceptable'",
```

```
    36), rep("'Always'", 36), rep("'Only if all'",
    36)))

##Order Cluster1 levels
EX1sumClu$Cluster1<-factor(EX1sumClu$Cluster1,
    levels=c("'Always'","'Rather Acceptable'","'Only
    if all'", "'Rather unacceptable'"))



#Plot
qplot(Transparency, Acceptability, data = EX1sumClu,
     group = Special, colour= Special, facets =
    Extent~Amount~Cluster1, geom="line")+
  geom_point() + geom_errorbar(aes(ymin=
      Acceptability-se, ymax=Acceptability+se), width
      =.1, size=.3, position=position_dodge())+
  facet_wrap(Extent~Amount~Cluster1, nrow=4)+
  scale_fill_manual(values=c("#CCCCCC","#FFFFFF")) +
  coord_cartesian(ylim=c(0,10)) +
  scale_y_continuous(breaks=seq(1:10)) +
  theme_bw() +
  geom_hline(yintercept=4.71, linetype="dotted") +
  theme(legend.position="top") +
  theme(legend.title = element_text(colour="black",
      size=12, face="bold"))+
  theme(axis.title.x = element_text(face="bold",
      colour="black", size=12))+
  theme(axis.title.y = element_text(face="bold",
      colour="black", size=14))+
  theme(strip.text.x = element_text())+
  geom_hline(aes(yintercept = Intercept), linetype="
      dashed")

#Subsetting all clusters
EX1c1.sub <- subset(EX1sumClu, Cluster == 1)
EX1c2.sub <- subset(EX1sumClu, Cluster == 2)
EX1c3.sub <- subset(EX1sumClu, Cluster == 3)
EX1c4.sub <- subset(EX1sumClu, Cluster == 4)

##Plotting all cluster graphs
p1<-qplot(Transparency, Acceptability, data = EX1c1.
    sub, group = Special, colour= Special, facets =
    Extent~Amount, geom="line")+
  geom_point() + geom_errorbar(aes(ymin=
      Acceptability-se, ymax=Acceptability+se), width
      =.1, size=.3, position=position_dodge())+
  facet_wrap(Extent~Amount, nrow=1)+
  scale_fill_manual(values=c("#CCCCCC","#FFFFFF")) +
  coord_cartesian(ylim=c(0,10)) +
  scale_y_continuous(breaks=seq(1:10)) +
```

```
  theme_bw() +
  geom_hline(yintercept=4.71, linetype="dotted") +
  theme(legend.position="top") +
  theme(legend.title = element_text(colour="black",
      size=12, face="bold"))+
  theme(axis.title.x = element_text(face="bold",
      colour="black", size=12))+
  theme(axis.title.y = element_text(face="bold",
      colour="black", size=14))+
  theme(strip.text.x = element_text())+
  geom_hline(aes(yintercept = Intercept), linetype="
      dashed")+
  ggtitle("Always Acceptable") +
  theme(plot.title = element_text(lineheight=.8,
      face="bold"))

p2<-qplot(Transparency, Acceptability, data = EX1c2.
    sub, group = Special, colour= Special, facets =
    Extent~Amount, geom="line")+
  geom_point() + geom_errorbar(aes(ymin=
      Acceptability-se, ymax=Acceptability+se), width
      =.1, size=.3, position=position_dodge())+
  facet_wrap(Extent~Amount, nrow=1)+
  scale_fill_manual(values=c("#CCCCCC","#FFFFFF")) +
  coord_cartesian(ylim=c(0,10)) +
  scale_y_continuous(breaks=seq(1:10)) +
  theme_bw() +
  geom_hline(yintercept=4.71, linetype="dotted") +
  theme(legend.position="top") +
  theme(legend.title = element_text(colour="black",
      size=12, face="bold"))+
  theme(axis.title.x = element_text(face="bold",
      colour="black", size=12))+
  theme(axis.title.y = element_text(face="bold",
      colour="black", size=14))+
  theme(strip.text.x = element_text())+
  geom_hline(aes(yintercept = Intercept), linetype="
      dashed")+
  ggtitle("Mainly Depends on Extent and Special
      Bonus") +
  theme(plot.title = element_text(lineheight=.8,
      face="bold"))


p3<- qplot(Transparency, Acceptability, data = EX1c3
    .sub, group = Special, colour= Special, facets =
    Extent~Amount, geom="line")+
  geom_point() + geom_errorbar(aes(ymin=
      Acceptability-se, ymax=Acceptability+se), width
      =.1, size=.3, position=position_dodge())+
  facet_wrap(Extent~Amount, nrow=1)+
```

```
  scale_fill_manual(values=c("#CCCCCC","#FFFFFF")) +
  coord_cartesian(ylim=c(0,10)) +
  scale_y_continuous(breaks=seq(1:10)) +
  theme_bw() +
  geom_hline(yintercept=4.71, linetype="dotted") +
  theme(legend.position="top") +
  theme(legend.title = element_text(colour="black",
     size=12, face="bold"))+
  theme(axis.title.x = element_text(face="bold",
     colour="black", size=12))+
  theme(axis.title.y = element_text(face="bold",
     colour="black", size=14))+
  theme(strip.text.x = element_text())+
  geom_hline(aes(yintercept = Intercept), linetype="
     dashed")+
  ggtitle("Mainly Depends on Extent") +
  theme(plot.title = element_text(lineheight=.8,
     face="bold"))


p4<-qplot(Transparency, Acceptability, data = EX1c4.
    sub, group = Special, colour= Special, facets =
    Extent~Amount, geom="line")+
  geom_point() + geom_errorbar(aes(ymin=
     Acceptability-se, ymax=Acceptability+se), width
     =.1, size=.3, position=position_dodge())+
  facet_wrap(Extent~Amount, nrow=1)+
  scale_fill_manual(values=c("#CCCCCC","#FFFFFF")) +
  coord_cartesian(ylim=c(0,10)) +
  scale_y_continuous(breaks=seq(1:10)) +
  theme_bw() +
  geom_hline(yintercept=4.71, linetype="dotted") +
  theme(legend.position="top") +
  theme(legend.title = element_text(colour="black",
     size=12, face="bold"))+
  theme(axis.title.x = element_text(face="bold",
     colour="black", size=12))+
  theme(axis.title.y = element_text(face="bold",
     colour="black", size=14))+
  theme(strip.text.x = element_text())+
  geom_hline(aes(yintercept = Intercept), linetype="
     dashed")+
  ggtitle("Mainly Depends on Procedure") +
  theme(plot.title = element_text(lineheight=.8,
     face="bold"))


##Define Multipot function
# Multiple plot function
#
```

```
# ggplot objects can be passed in ..., or to plotlist (as a list of ggplot objects)
# - cols:   Number of columns in layout
# - layout: A matrix specifying the layout. If present, 'cols' is ignored.
#
# If the layout is something like matrix(c(1,2,3,3), nrow=2, byrow=TRUE),
# then plot 1 will go in the upper left, 2 will go in the upper right, and
# 3 will go all the way across the bottom.
#
multiplot <- function(..., plotlist=NULL, file, cols=1, layout=NULL) {
  require(grid)

  # Make a list from the ... arguments and plotlist
  plots <- c(list(...), plotlist)

  numPlots = length(plots)

  # If layout is NULL, then use 'cols' to determine layout
  if (is.null(layout)) {
    # Make the panel
    # ncol: Number of columns of plots
    # nrow: Number of rows needed, calculated from # of cols
    layout <- matrix(seq(1, cols * ceiling(numPlots/cols)),
                     ncol = cols, nrow = ceiling(numPlots/cols))
  }

  if (numPlots==1) {
    print(plots[[1]])

  } else {
    # Set up the page
    grid.newpage()
    pushViewport(viewport(layout = grid.layout(nrow(layout), ncol(layout))))

    # Make each plot, in the correct location
    for (i in 1:numPlots) {
      # Get the i,j matrix positions of the regions that contain this subplot
      matchidx <- as.data.frame(which(layout == i, arr.ind = TRUE))
```

```
      print(plots[[i]], vp = viewport(layout.pos.row
          = matchidx$row,
                                      layout.pos.col
                                          = matchidx
                                         $col))
    }
  }
}

##Plot all graphs in one
multiplot(p3, p1, p4, p2, cols=2)
```

14.3 EXECUTIVES BONUSES

```
summary(EX2)

EX2s<-EX2
require(outliers)
rm.outlier(EX2$Acceptability, fill =TRUE)

##Norm data within
## Norms the data within specified groups in a data
   frame; it normalizes each
## subject (identified by idvar) so that they have
   the same mean, within each group
## specified by betweenvars.
##   data: a data frame.
##   idvar: the name of a column that identifies
   each subject (or matched subjects)
##   measurevar: the name of a column that contains
   the variable to be summariezed
##   betweenvars: a vector containing names of
   columns that are between-subjects variables
##   na.rm: a boolean that indicates whether to
   ignore NA's
normDataWithin <- function(data=NULL, idvar,
   measurevar, betweenvars=NULL,
                           na.rm=FALSE, .drop=TRUE)
                               {
  require(plyr)

  # Measure var on left, idvar + between vars on
     right of formula.
  data.subjMean <- ddply(data, c(idvar, betweenvars)
     , .drop=.drop,
                         .fun = function(xx, col, na
                            .rm) {
```

```
                                c(subjMean = mean(xx[,col
                                    ], na.rm=na.rm))
                            },
                            measurevar,
                            na.rm
  )

  # Put the subject means with original data
  data <- merge(data, data.subjMean)

  # Get the normalized data in a new column
  measureNormedVar <- paste(measurevar, "_norm", sep
      ="")
  data[,measureNormedVar] <- data[,measurevar] -
      data[,"subjMean"] +
    mean(data[,measurevar], na.rm=na.rm)

  # Remove this subject mean column
  data$subjMean <- NULL

  return(data)
}

## Summarizes data, handling within-subjects
    variables by removing inter-subject variability.
## It will still work if there are no within-S
    variables.
## Gives count, un-normed mean, normed mean (with
    same between-group mean),
##   standard deviation, standard error of the mean,
     and confidence interval.
## If there are within-subject variables, calculate
    adjusted values using method from Morey (2008).
##   data: a data frame.
##   measurevar: the name of a column that contains
    the variable to be summariezed
##   betweenvars: a vector containing names of
    columns that are between-subjects variables
##   withinvars: a vector containing names of
    columns that are within-subjects variables
##   idvar: the name of a column that identifies
    each subject (or matched subjects)
##   na.rm: a boolean that indicates whether to
    ignore NA's
##   conf.interval: the percent range of the
    confidence interval (default is 95%)
summarySEwithin <- function(data=NULL, measurevar,
    betweenvars=NULL, withinvars=NULL,
                            idvar=NULL, na.rm=FALSE,
                                conf.interval=.95, .
                               drop=TRUE) {
```

```
58  # Ensure that the betweenvars and withinvars are
        factors
    factorvars <- vapply(data[, c(betweenvars,
        withinvars), drop=FALSE],
60                       FUN=is.factor, FUN.VALUE=
                             logical(1))

62  if (!all(factorvars)) {
      nonfactorvars <- names(factorvars)[!factorvars]
64    message("Automatically converting the following
          non-factors to factors: ",
              paste(nonfactorvars, collapse = ", "))
66    data[nonfactorvars] <- lapply(data[nonfactorvars
          ], factor)
    }
68
    # Get the means from the un-normed data
70  datac <- summarySE(data, measurevar, groupvars=c(
        betweenvars, withinvars),
                       na.rm=na.rm, conf.interval=conf
                           .interval, .drop=.drop)
72
    # Drop all the unused columns (these will be
        calculated with normed data)
74  datac$sd <- NULL
    datac$se <- NULL
76  datac$ci <- NULL

78  # Norm each subject's data
    ndata <- normDataWithin(data, idvar, measurevar,
        betweenvars, na.rm, .drop=.drop)
80
    # This is the name of the new column
82  measurevar_n <- paste(measurevar, "_norm", sep="")

84  # Collapse the normed data - now we can treat
        between and within vars the same
    ndatac <- summarySE(ndata, measurevar_n, groupvars
        =c(betweenvars, withinvars),
86                      na.rm=na.rm, conf.interval=
                            conf.interval, .drop=.drop)

88  # Apply correction from Morey (2008) to the
        standard error and confidence interval
    #  Get the product of the number of conditions of
        within-S variables
90  nWithinGroups    <- prod(vapply(ndatac[,withinvars
        , drop=FALSE], FUN=nlevels,
                                    FUN.VALUE=numeric
                                        (1)))
```

```
  correctionFactor <- sqrt( nWithinGroups / (
     nWithinGroups-1) )

  # Apply the correction factor
  ndatac$sd <- ndatac$sd * correctionFactor
  ndatac$se <- ndatac$se * correctionFactor
  ndatac$ci <- ndatac$ci * correctionFactor

  # Combine the un-normed means with the normed
     results
  merge(datac, ndatac)
}

## Summarizes data.
## Gives count, mean, standard deviation, standard
   error of the mean, and confidence interval (
   default 95%).
##   data: a data frame.
##   measurevar: the name of a column that contains
   the variable to be summariezed
##   groupvars: a vector containing names of columns
    that contain grouping variables
##   na.rm: a boolean that indicates whether to
   ignore NA's
##   conf.interval: the percent range of the
   confidence interval (default is 95%)
summarySE <- function(data=NULL, measurevar,
   groupvars=NULL, na.rm=FALSE,
                      conf.interval=.95, .drop=TRUE)
                          {
  require(plyr)

  # New version of length which can handle NA's: if
     na.rm==T, don't count them
  length2 <- function (x, na.rm=FALSE) {
    if (na.rm) sum(!is.na(x))
    else       length(x)
  }

  # This is does the summary; it's not easy to
     understand...
  datac <- ddply(data, groupvars, .drop=.drop,
                 .fun= function(xx, col, na.rm) {
                   c( N    = length2(xx[,col], na.rm
                      =na.rm),
                      mean = mean   (xx[,col], na.rm
                         =na.rm),
                      sd   = sd     (xx[,col], na.rm
                         =na.rm)
                   )
                 },
```

```
                  measurevar,
                  na.rm
  )

  # Rename the "mean" column
  datac <- rename(datac, c("mean"=measurevar))

  datac$se <- datac$sd / sqrt(datac$N)  # Calculate
     standard error of the mean

  # Confidence interval multiplier for standard
     error
  # Calculate t-statistic for confidence interval:
  # e.g., if conf.interval is .95, use .975 (above/
     below), and use df=N-1
  ciMult <- qt(conf.interval/2 + .5, datac$N-1)
  datac$ci <- datac$se * ciMult

  return(datac)
}

EX2sum <- summarySEwithin(EX2s, measurevar="
    Acceptability", withinvars=c("Special","
    Transparency", "Amount", "Extent"), idvar="
    subject")

require(ggplot2)
require(grid)

EX2sum$Amount<-factor(EX2sum$Amount, levels=c("18
    month","12 month","6 month"))
EX2sum$Special<-factor(EX2sum$Special, levels=c("
    Special","No special"))


qplot(Extent, Acceptability, data = EX2sum, group =
    Amount, colour= Amount, facets = Transparency~
    Special, geom="line")+
  geom_point() + geom_errorbar(aes(ymin=
     Acceptability-se, ymax=Acceptability+se), width
     =.1, size=.3, position=position_dodge())+
  facet_wrap(Transparency~Special, nrow=1)+
  scale_fill_manual(values=c("#CCCCCC","#FFFFFF")) +
  coord_cartesian(ylim=c(0,10)) +
  scale_y_continuous(breaks=seq(1:10)) +
  theme_bw() +
  geom_hline(yintercept=4.71, linetype="dashed") +
  theme(legend.position="top") +
  theme(legend.title = element_text(colour="black",
     size=12, face="bold"))+
```

```
  theme(axis.title.x = element_text(face="bold",
     colour="black", size=12))+
  theme(axis.title.y = element_text(face="bold",
     colour="black", size=14))+
  theme(strip.text.x = element_text())

EX2sumClu <- summarySEwithin(EX2s, measurevar="
    Acceptability", betweenvars="Cluster", withinvars
    =c("Special","Transparency", "Amount", "Extent"),
     idvar="subject")


## Ask for Cluster means
ddply(EX2s,~Cluster,summarise,mean=mean(
   Acceptability),sd=sd(Acceptability))

## manually define the Intercepts for each cluster
EX2sumClu$Intercept <- c(rep(4.79, 36), rep(1.72,
   36), rep(3.44, 36), rep(7.84, 36))

#Order cluster factors
EX2sumClu$Cluster<-factor(EX2sumClu$Cluster, levels=
   c("4","1","3", "2"))

#Order Special
EX2sumClu$Special<-factor(EX2sumClu$Special, levels=
   c("Special","No special"))

#Order Amount
EX2sumClu$Amount<-factor(EX2sumClu$Amount, levels=c(
   "18 month","12 month", "6 month"))


#Create Cluster factor for names display
EX2sumClu$Cluster1 <- factor(c(rep("'All and Clear'"
   , 36), rep("'Unacceptable'", 36), rep("'Rather
   not'", 36), rep("'Always'", 36)))

#Reorder Cluster names
EX2sumClu$Cluster1<-factor(EX2sumClu$Cluster1,
   levels=c("'Always'","'All and Clear'","'Rather
   not'", "'Unacceptable'"))


qplot(Extent, Acceptability, data = EX2sumClu, group
    = Amount, colour= Amount, facets = Transparency~
   Special~Cluster1, geom="line")+
  geom_point() + geom_errorbar(aes(ymin=
     Acceptability-se, ymax=Acceptability+se), width
     =.1, size=.3, position=position_dodge())+
  facet_wrap(Transparency~Special~Cluster1, nrow=4)+
```

```
198   scale_fill_manual(values=c("#CCCCCC","#FFFFFF")) +
      coord_cartesian(ylim=c(0,10)) +
200   scale_y_continuous(breaks=seq(1:10)) +
      theme_bw() +
202   geom_hline(yintercept=4.71, linetype="dotted") +
      theme(legend.position="top") +
204   theme(legend.title = element_text(colour="black",
          size=12, face="bold"))+
      theme(axis.title.x = element_text(face="bold",
          colour="black", size=12))+
206   theme(axis.title.y = element_text(face="bold",
          colour="black", size=14))+
      theme(strip.text.x = element_text())+
208   geom_hline(aes(yintercept = Intercept), linetype="
          dashed")
```

15

SCRIPTS SECTION 3

15.1 FIGURES OF SECTION 3

R-Scripts used for Data Visualization. Significance analysis was performed using SPSS software. The present script only produces the figures.

```
##Norm data within
## Norms the data within specified groups in a data frame; it normalizes each
## subject (identified by idvar) so that they have the same mean, within each group
## specified by betweenvars.
##   data: a data frame.
##   idvar: the name of a column that identifies each subject (or matched subjects)
##   measurevar: the name of a column that contains the variable to be summariezed
##   betweenvars: a vector containing names of columns that are between-subjects variables
##   na.rm: a boolean that indicates whether to ignore NA's
normDataWithin <- function(data=NULL, idvar, measurevar, betweenvars=NULL,
                           na.rm=FALSE, .drop=TRUE) {
  require(plyr)

  # Measure var on left, idvar + between vars on right of formula.
  data.subjMean <- ddply(data, c(idvar, betweenvars), .drop=.drop,
                         .fun = function(xx, col, na.rm) {
                           c(subjMean = mean(xx[,col], na.rm=na.rm))
                         },
                         measurevar,
                         na.rm
```

```
  )

  # Put the subject means with original data
  data <- merge(data, data.subjMean)

  # Get the normalized data in a new column
  measureNormedVar <- paste(measurevar, "_norm", sep
      ="")
  data[,measureNormedVar] <- data[,measurevar] -
      data[,"subjMean"] +
    mean(data[,measurevar], na.rm=na.rm)

  # Remove this subject mean column
  data$subjMean <- NULL

  return(data)
}

## Summarizes data, handling within-subjects
    variables by removing inter-subject variability.
## It will still work if there are no within-S
    variables.
## Gives count, un-normed mean, normed mean (with
    same between-group mean),
##   standard deviation, standard error of the mean,
     and confidence interval.
## If there are within-subject variables, calculate
    adjusted values using method from Morey (2008).
##   data: a data frame.
##   measurevar: the name of a column that contains
    the variable to be summariezed
##   betweenvars: a vector containing names of
    columns that are between-subjects variables
##   withinvars: a vector containing names of
    columns that are within-subjects variables
##   idvar: the name of a column that identifies
    each subject (or matched subjects)
##   na.rm: a boolean that indicates whether to
    ignore NA's
##   conf.interval: the percent range of the
    confidence interval (default is 95%)
summarySEwithin <- function(data=NULL, measurevar,
    betweenvars=NULL, withinvars=NULL,
                            idvar=NULL, na.rm=FALSE,
                                conf.interval=.95, .
                               drop=TRUE) {

  # Ensure that the betweenvars and withinvars are
      factors
  factorvars <- vapply(data[, c(betweenvars,
      withinvars), drop=FALSE],
```

```
                      FUN=is.factor, FUN.VALUE=
                         logical(1))

55
  if (!all(factorvars)) {
57  nonfactorvars <- names(factorvars)[!factorvars]
    message("Automatically converting the following
       non-factors to factors: ",
59          paste(nonfactorvars, collapse = ", "))
    data[nonfactorvars] <- lapply(data[nonfactorvars
       ], factor)
61  }

63  # Get the means from the un-normed data
    datac <- summarySE(data, measurevar, groupvars=c(
       betweenvars, withinvars),
65                     na.rm=na.rm, conf.interval=conf
                          .interval, .drop=.drop)

67  # Drop all the unused columns (these will be
       calculated with normed data)
    datac$sd <- NULL
69  datac$se <- NULL
    datac$ci <- NULL
71
    # Norm each subject's data
73  ndata <- normDataWithin(data, idvar, measurevar,
       betweenvars, na.rm, .drop=.drop)

75  # This is the name of the new column
    measurevar_n <- paste(measurevar, "_norm", sep="")
77
    # Collapse the normed data - now we can treat
       between and within vars the same
79  ndatac <- summarySE(ndata, measurevar_n, groupvars
       =c(betweenvars, withinvars),
                        na.rm=na.rm, conf.interval=
                           conf.interval, .drop=.drop)
81
    # Apply correction from Morey (2008) to the
       standard error and confidence interval
83  #  Get the product of the number of conditions of
       within-S variables
    nWithinGroups    <- prod(vapply(ndatac[,withinvars
       ], drop=FALSE], FUN=nlevels,
85                                  FUN.VALUE=numeric
                                       (1)))
    correctionFactor <- sqrt( nWithinGroups / (
       nWithinGroups-1) )
87
    # Apply the correction factor
89  ndatac$sd <- ndatac$sd * correctionFactor
```

```
  ndatac$se <- ndatac$se * correctionFactor
91  ndatac$ci <- ndatac$ci * correctionFactor

93  # Combine the un-normed means with the normed
      results
  merge(datac, ndatac)
95 }

97 ## Summarizes data.
   ## Gives count, mean, standard deviation, standard
      error of the mean, and confidence interval (
      default 95%).
99 ##   data: a data frame.
   ##   measurevar: the name of a column that contains
      the variable to be summariezed
101##   groupvars: a vector containing names of columns
       that contain grouping variables
   ##   na.rm: a boolean that indicates whether to
      ignore NA's
103##   conf.interval: the percent range of the
      confidence interval (default is 95%)
   summarySE <- function(data=NULL, measurevar,
      groupvars=NULL, na.rm=FALSE,
105                      conf.interval=.95, .drop=TRUE)
                             {
  require(plyr)
107
  # New version of length which can handle NA's: if
      na.rm==T, don't count them
109 length2 <- function (x, na.rm=FALSE) {
    if (na.rm) sum(!is.na(x))
111 else       length(x)
  }
113
  # This is does the summary; it's not easy to
      understand...
115 datac <- ddply(data, groupvars, .drop=.drop,
                  .fun= function(xx, col, na.rm) {
117                 c( N    = length2(xx[,col], na.rm
                        =na.rm),
                       mean = mean   (xx[,col], na.rm
                          =na.rm),
119                    sd   = sd     (xx[,col], na.rm
                          =na.rm)
                    )
121               },
                  measurevar,
123               na.rm
  )
125
  # Rename the "mean" column
```

```
  datac <- rename(datac, c("mean"=measurevar))

  datac$se <- datac$sd / sqrt(datac$N)  # Calculate
     standard error of the mean

  # Confidence interval multiplier for standard
     error
  # Calculate t-statistic for confidence interval:
  # e.g., if conf.interval is .95, use .975 (above/
     below), and use df=N-1
  ciMult <- qt(conf.interval/2 + .5, datac$N-1)
  datac$ci <- datac$se * ciMult

  return(datac)
}


sumdata <- summarySE(PlotReveal, measurevar="
    Decision", groupvars="Expt")


require(ggplot2)

Figure1<-ggplot(sumdata, aes(factor(Expt),sumdata$
   Decision,ymin=sumdata$Decision-sumdata$ci,ymax=
   sumdata$Decision+sumdata$ci,colour=factor(Expt),
   size=sumdata$N))+
  geom_linerange() +
  coord_flip()+xlab("Experiment") +
  ylab("Proportion of reveal choices")+
  geom_hline(yintercept=.5,size=0.75,linetype=2)+
  geom_hline(yintercept=.58,size=47,alpha=0.1)+
    geom_hline(yintercept=.58,size=1)+
  theme_bw()+theme(legend.position="none", aspect.
     ratio=2/1)


require(MASS)
Figure2<-ggplot(PlotPredicted, aes(Earnings,Score,
   linetype=Perspective))+
  stat_smooth(method="rlm",fill="lightgray",colour="
     black",size=1)+
  geom_point(aes(colour= factor(Expt)),size=2,shape
     =19,position=position_jitter(width=.3, height
     =.1) , alpha=0.33)+
  xlab("Revealed earnings of quiz loser") +
  ylab("Envy of quiz winner") +
  scale_colour_manual("",values= c("red","darkgreen"
     ,"blue"),labels=c("Expt.1","Expt.2","Expt.3"))+
  theme_bw()+ theme(legend.position="right", aspect.
     ratio=2/1.25)
```

```
165
tiff("Figure1.tiff", width=4, height=5, units="in",
    res=320, compression="lzw")
167 plot(Figure1)
dev.off()
169
tiff("Figure2.tiff", width=4, height=5, units="in",
    res=320, compression="lzw")
171 plot(Figure2)
dev.off()
```

16

SUPPLEMENTARY TABLES SECTION 1

16.1 DESCRIPTIVE STATISTICS EXPERIMENT 6

Variable	n	Min	$\bar{x}$	$\tilde{x}$	Max	IQR	#NA
SRI fund	196	0.0	49.0	50.0	100.0	45.0	0
Conventional fund	196	0.0	31.2	27.5	100.0	40.0	0
Time	196	4.2	272.9	69.1	32923.1	75.1	0
Clicks	196	2.0	5.9	4.0	37.0	4.0	0
Don.WWF	196	0.0	189.7	0.0	5000.0	100.0	0
Don.CARE	196	0.0	223.5	0.0	3000.0	200.0	0
Don.TranspIntl	196	0.0	65.2	0.0	1000.0	10.0	0
Don.WIKI	196	0.0	72.0	0.0	5000.0	0.0	0
OverallDonation	196	0.0	550.3	100.0	5000.0	500.0	0
Discount	196	0.0	0.2	0.0	2.0	0.0	0
InvestmentExpertise	196	1.0	2.9	3.0	5.3	1.7	0
Cons.Effectiveness	196	2.8	5.7	5.9	7.0	1.5	0
SelfMonitoring	196	0.0	0.3	0.3	0.7	0.3	0
Altruism	196	2.6	5.5	5.5	7.0	1.0	0
Risk	196	1.0	3.2	3.3	6.7	1.8	0
Capital	196	3.0	17.6	16.5	32.0	14.0	0
SRI performance	196	1.0	4.2	4.0	6.0	3.0	0
Business vs. environment	196	1.0	4.1	4.0	7.0	2.0	0
Business vs. social	196	1.0	4.2	4.0	7.0	2.0	0
SRI expertise	196	1.0	2.8	3.0	7.0	2.0	0
SRI abundance	196	1.0	4.5	4.0	7.0	2.0	0
SRI improve S	196	1.0	5.3	6.0	7.0	1.2	0
SRI improve E	196	1.0	5.1	5.0	7.0	2.0	0
SRI riskiness	196	1.0	3.6	4.0	7.0	1.0	0
SRI effectivenss 1	196	1.0	5.1	5.0	7.0	2.0	0
SRI effectivenss 2	196	1.0	4.7	5.0	7.0	2.0	0
Age	196	14.0	50.8	52.0	114.0	19.0	0
Education	196	1.0	3.6	3.0	7.0	3.0	0

Table 16.1: Table of continuous measure in Experiment 6.

Variable	Levels	n	Min	$\bar{x}$	$\tilde{x}$	Max	IQR	#NA
SRI fund	Don	49	0.0	52.4	50.0	100.0	40.0	0
	Label	49	0.0	55.9	50.0	100.0	20.0	0
	Newspaper.Art	49	0.0	40.4	50.0	100.0	30.0	0
	NumberOfFunds	49	0.0	47.3	50.0	100.0	55.0	0
	all	196	0.0	49.0	50.0	100.0	45.0	0
Conventional fund	Don	49	0.0	28.5	25.0	100.0	35.0	0
	Label	49	0.0	30.6	30.0	100.0	40.0	0
	Newspaper.Art	49	0.0	34.5	30.0	100.0	30.0	0
	NumberOfFunds	49	0.0	31.3	25.0	100.0	40.0	0
	all	196	0.0	31.2	27.5	100.0	40.0	0
Time	Don	49	4.2	140.7	69.1	1160.3	153.0	0
	Label	49	4.3	89.8	62.4	847.1	50.9	0
	Newspaper.Art	49	12.6	91.4	67.2	628.3	71.1	0
	NumberOfFunds	49	13.4	769.6	76.7	32923.1	73.8	0
	all	196	4.2	272.9	69.1	32923.1	75.1	0
Clicks	Don	49	2.0	6.3	4.0	25.0	5.0	0
	Label	49	2.0	5.0	4.0	13.0	4.0	0
	Newspaper.Art	49	2.0	5.4	5.0	19.0	4.0	0
	NumberOfFunds	49	2.0	6.9	5.0	37.0	4.0	0
	all	196	2.0	5.9	4.0	37.0	4.0	0
Don.WWF	Don	49	0.0	184.5	0.0	5000.0	100.0	0
	Label	49	0.0	222.7	0.0	2000.0	300.0	0
	Newspaper.Art	49	0.0	255.7	10.0	3000.0	200.0	0
	NumberOfFunds	49	0.0	95.8	0.0	1000.0	50.0	0
	all	196	0.0	189.7	0.0	5000.0	100.0	0
Don.CARE	Don	49	0.0	223.0	0.0	2500.0	200.0	0
	Label	49	0.0	368.5	50.0	3000.0	500.0	0
	Newspaper.Art	49	0.0	181.4	0.0	2500.0	100.0	0
	NumberOfFunds	49	0.0	121.0	0.0	1000.0	100.0	0
	all	196	0.0	223.5	0.0	3000.0	200.0	0
Don.TranspIntl	Don	49	0.0	38.7	0.0	500.0	0.0	0
	Label	49	0.0	126.1	0.0	1000.0	50.0	0
	Newspaper.Art	49	0.0	78.6	0.0	1000.0	50.0	0
	NumberOfFunds	49	0.0	17.2	0.0	180.0	0.0	0
	all	196	0.0	65.2	0.0	1000.0	10.0	0
Don.WIKI	Don	49	0.0	125.4	0.0	5000.0	0.0	0
	Label	49	0.0	95.6	0.0	1000.0	25.0	0
	Newspaper.Art	49	0.0	56.5	0.0	1500.0	0.0	0
	NumberOfFunds	49	0.0	10.5	0.0	150.0	0.0	0
	all	196	0.0	72.0	0.0	5000.0	0.0	0
OverallDonation	Don	49	0.0	571.5	150.0	5000.0	500.0	0
	Label	49	0.0	812.9	200.0	5000.0	1000.0	0
	Newspaper.Art	49	0.0	572.2	100.0	5000.0	500.0	0
	NumberOfFunds	49	0.0	244.6	100.0	2000.0	220.0	0

	all	196	0.0	550.3	100.0	5000.0	500.0	0
Discount	Don	49	0.0	0.2	0.0	2.0	0.0	0
	Label	49	0.0	0.2	0.0	2.0	0.0	0
	Newspaper.Art	49	0.0	0.2	0.0	2.0	0.0	0
	NumberOfFunds	49	0.0	0.2	0.0	2.0	0.0	0
	all	196	0.0	0.2	0.0	2.0	0.0	0
InvestmentExperience	Don	49	1.0	2.8	3.0	4.7	1.3	0
	Label	49	1.3	2.9	3.0	5.0	1.3	0
	Newspaper.Art	49	1.0	2.8	3.0	4.7	1.0	0
	NumberOfFunds	49	1.0	2.9	3.3	5.3	1.7	0
	all	196	1.0	2.9	3.0	5.3	1.7	0
Cons.Effectiveness	Don	49	3.5	5.8	6.0	7.0	1.8	0
	Label	49	2.8	5.5	5.8	7.0	1.2	0
	Newspaper.Art	49	3.5	5.8	6.0	7.0	1.2	0
	NumberOfFunds	49	4.0	5.7	6.0	7.0	1.8	0
	all	196	2.8	5.7	5.9	7.0	1.5	0
SelfMonitoring	Don	49	0.1	0.3	0.3	0.7	0.2	0
	Label	49	0.1	0.3	0.3	0.7	0.3	0
	Newspaper.Art	49	0.0	0.3	0.3	0.6	0.2	0
	NumberOfFunds	49	0.1	0.3	0.3	0.6	0.3	0
	all	196	0.0	0.3	0.3	0.7	0.3	0
Altruism	Don	49	4.0	5.5	5.4	7.0	0.9	0
	Label	49	2.9	5.4	5.4	6.6	1.0	0
	Newspaper.Art	49	2.6	5.3	5.4	7.0	1.0	0
	NumberOfFunds	49	3.5	5.6	5.6	7.0	0.9	0
	all	196	2.6	5.5	5.5	7.0	1.0	0
Risk	Don	49	1.0	3.1	3.2	5.8	1.8	0
	Label	49	1.2	3.2	3.3	5.2	1.5	0
	Newspaper.Art	49	1.0	3.2	3.5	5.5	2.2	0
	NumberOfFunds	49	1.0	3.2	3.7	6.7	1.7	0
	all	196	1.0	3.2	3.3	6.7	1.8	0
Capital	Don	49	3.0	16.3	14.0	30.5	13.0	0
	Label	49	5.0	16.9	15.0	32.0	12.5	0
	Newspaper.Art	49	4.0	17.3	16.5	32.0	17.0	0
	NumberOfFunds	49	4.5	20.1	20.0	32.0	12.0	0
	all	196	3.0	17.6	16.5	32.0	14.0	0
SRI Performance	Don	49	1.0	4.2	4.0	6.0	2.0	0
	Label	49	2.0	4.2	4.0	6.0	3.0	0
	Newspaper.Art	49	2.0	4.1	4.0	6.0	2.0	0
	NumberOfFunds	49	2.0	4.3	4.0	6.0	3.0	0
	all	196	1.0	4.2	4.0	6.0	3.0	0
Business vs. environment	Don	49	1.0	4.3	4.0	7.0	3.0	0
	Label	49	1.0	4.0	4.0	7.0	2.0	0
	Newspaper.Art	49	1.0	4.2	4.0	7.0	2.0	0

	NumberOfFunds	49	1.0	3.9	4.0	7.0	2.0	0
	all	196	1.0	4.1	4.0	7.0	2.0	0
Business vs. social	Don	49	1.0	4.0	4.0	7.0	2.0	0
	Label	49	1.0	4.5	5.0	7.0	2.0	0
	Newspaper.Art	49	1.0	4.2	4.0	7.0	2.0	0
	NumberOfFunds	49	1.0	4.2	4.0	7.0	2.0	0
	all	196	1.0	4.2	4.0	7.0	2.0	0
SRI expertise	Don	49	1.0	2.9	3.0	7.0	3.0	0
	Label	49	1.0	2.8	3.0	7.0	2.0	0
	Newspaper.Art	49	1.0	2.6	2.0	6.0	3.0	0
	NumberOfFunds	49	1.0	3.1	3.0	7.0	2.0	0
	all	196	1.0	2.8	3.0	7.0	2.0	0
SRI abundance	Don	49	1.0	4.5	4.0	7.0	2.0	0
	Label	49	1.0	4.5	4.0	7.0	1.0	0
	Newspaper.Art	49	1.0	4.9	5.0	7.0	2.0	0
	NumberOfFunds	49	1.0	4.1	4.0	7.0	2.0	0
	all	196	1.0	4.5	4.0	7.0	2.0	0
SRI improve S	Don	49	1.0	5.3	6.0	7.0	2.0	0
	Label	49	1.0	5.3	5.0	7.0	1.0	0
	Newspaper.Art	49	1.0	5.3	6.0	7.0	3.0	0
	NumberOfFunds	49	1.0	5.1	5.0	7.0	2.0	0
	all	196	1.0	5.3	6.0	7.0	1.2	0
SRI improve E	Don	49	1.0	5.1	5.0	7.0	2.0	0
	Label	49	1.0	5.1	5.0	7.0	2.0	0
	Newspaper.Art	49	1.0	5.3	5.0	7.0	3.0	0
	NumberOfFunds	49	2.0	5.0	5.0	7.0	2.0	0
	all	196	1.0	5.1	5.0	7.0	2.0	0
SRI riskiness	Don	49	1.0	3.5	4.0	7.0	2.0	0
	Label	49	1.0	3.9	4.0	7.0	1.0	0
	Newspaper.Art	49	1.0	3.5	4.0	7.0	2.0	0
	NumberOfFunds	49	1.0	3.6	4.0	7.0	1.0	0
	all	196	1.0	3.6	4.0	7.0	1.0	0
SRI effectivenss 1	Don	49	1.0	5.1	5.0	7.0	2.0	0
	Label	49	2.0	5.1	5.0	7.0	2.0	0
	Newspaper.Art	49	1.0	4.9	5.0	7.0	2.0	0
	NumberOfFunds	49	1.0	5.2	5.0	7.0	2.0	0
	all	196	1.0	5.1	5.0	7.0	2.0	0
SRI effectivenss 2	Don	49	1.0	4.8	5.0	7.0	2.0	0
	Label	49	1.0	5.2	6.0	7.0	2.0	0
	Newspaper.Art	49	1.0	4.5	4.0	7.0	3.0	0
	NumberOfFunds	49	1.0	4.6	5.0	7.0	3.0	0
	all	196	1.0	4.7	5.0	7.0	2.0	0
Age	Don	49	24.0	50.8	51.0	114.0	15.0	0
	Label	49	14.0	50.2	50.0	72.0	19.0	0
	Newspaper.Art	49	19.0	49.4	50.0	73.0	21.0	0

	NumberOfFunds	49	22.0	52.7	53.0	74.0	13.0	0
	all	196	14.0	50.8	52.0	114.0	19.0	0
Studies	Don	49	1.0	3.8	3.0	7.0	3.0	0
	Label	49	1.0	3.4	3.0	7.0	3.0	0
	Newspaper.Art	49	1.0	3.4	3.0	7.0	3.0	0
	NumberOfFunds	49	1.0	4.1	4.0	7.0	2.0	0
	all	196	1.0	3.6	3.0	7.0	3.0	0
Work	Don	49	1.0	5.8	6.0	9.0	2.0	0
	Label	49	1.0	5.0	5.0	9.0	4.0	0
	Newspaper.Art	49	1.0	5.2	5.0	9.0	4.0	0
	NumberOfFunds	49	1.0	5.2	5.0	9.0	4.0	0
	all	196	1.0	5.3	5.0	9.0	4.0	0

Table 16.2: Table of continuous measures in Experiment 5, broken dow by experimeneal groups.

Interaction model SRI investors M1: SRI.propotion SRIInvestor * (Don.WWF + Don.CARE + Don.TranspIntl + Don.WIKI + Label * Risk + Label * InvestmentExperience + Label * ISR.Conn.1 + Label * ISR.Abon.2 + Public.article * SelfMonitoring + Altruism + Discount + Cons.Effectiveness + Capital + ISR.Conn.1 + ImproveS + ImproveE + ISR.Risk.5 + ISR.Raison.1 + ISR.Raison2 + Crisis.1 + Crisis.2 + Clicks + Time + Age + Studies + Work)

16.2 BETAREG: SRI FUNDS INTERACTION WITH INVESTOR TYPE EXPERIMENT 5

]

Table 16.3: Likelihood to invest in SRI funds interaction with investor type (betareg; standardized scores)

	Dependent variable:
	Proportion of SRI
	All investors
SRI Investor	2.470** (1.109)
Don WWF	−0.123 (0.107)
Don Care	−0.101 (0.102)
Don Transp. Intl	−0.011 (0.121)
Don Wiki	−0.310 (0.297)
Label	0.065 (0.206)
Risk propensity	0.244 (0.168)
Investment Experience	0.103 (0.203)
SRI knowledge	−0.635*** (0.183)
SRI abundance	−0.091 (0.165)
Public article	−0.282 (0.209)
Self monitoring	0.328* (0.185)
Altruism	−0.042 (0.105)
Discount	−0.281*** (0.101)
Cons. Effectiveness	−0.160 (0.117)
Capital	−0.103 (0.126)
Improve S	−0.194 (0.184)
Improve E	0.355** (0.155)
SRI less risky	−0.118 (0.108)
Improve coporate behav.	0.174 (0.146)
Not partner wrong	0.190 (0.133)
Values E	0.493*** (0.136)
Values s	−0.037 (0.117)
Clicks on Funds	−0.166 (0.102)

Continued in Table 16.4

]

Table 16.4: Likelihood to invest in SRI funds interaction with investor type (betareg; standardized scores) (2)

Continued from Table 16.3	
Time to select Funds	−0.105 (0.092)
Age	0.007 (0.143)
Studies	0.246** (0.110)
Work	−0.231* (0.118)
Label:Risk propensity	−0.134 (0.211)
Label:Invest. Experience	−0.471* (0.245)
Label:SRI knowledge	0.534** (0.234)
Label:SRI abundance	−0.346* (0.204)
Public article:Self monitoring	−0.188 (0.211)
SRI Investor:Don WWF	2.940 (2.217)
SRI Investor:Don Care	−1.149* (0.589)
SRI Investor:Don Transp. Intl	−0.193 (0.568)
SRI Investor:Don Wiki	0.245 (0.319)
SRI Investor:Label	−0.473 (0.442)
SRI Investor:Risk propensity	−0.273 (0.414)
SRI Investor:Investment Experience	−0.109 (0.495)
SRI Investor:SRI knowledge	−0.163 (0.527)
SRI Investor:SRI abundance	0.313 (0.529)
SRI Investor:Public article	0.419 (0.490)
SRI Investor:Self monitoring	−0.572 (0.429)
SRI Investor:Altruism	0.166 (0.249)
SRI Investor:Discount	−0.090 (0.341)
Continued in Table 16.5	

]

Table 16.5: Likelihood to invest in SRI funds interaction with investor type (betareg; standardized scores) (3)

Continued from Table 16.4	
SRI Investor:Cons. Effectiveness	0.825*** (0.273)
SRI Investor:Capital	−0.115 (0.264)
SRI Investor:Improve S	0.365 (0.338)
SRI Investor:Improve E	−0.236 (0.387)
SRI Investor:SRI less risky	0.520** (0.254)
SRI Investor:Improve coporate behav.	−0.241 (0.282)
SRI Investor:Not partner wrong	−0.037 (0.250)
SRI Investor:Values E	−0.980*** (0.250)
SRI Investor:Values s	−0.629** (0.248)
SRI Investor:Clicks on Funds	−0.500* (0.295)
SRI Investor:Time to select Funds	24.799*** (9.343)
SRI Investor:Age	−0.074 (0.302)
SRI Investor:Studies	−0.303 (0.242)
SRI Investor:Work	0.133 (0.255)
SRI Investor:Label:Risk propensity	0.097 (0.485)
SRI Investor:Label:Invest. Experience	1.359** (0.625)
SRI Investor:Label:SRI knowlege	0.130 (0.653)
SRI Investor:Label:SRI abundance	−0.504 (0.638)
SRI Investor:Public article:Self monitoring	0.301 (0.502)
Constant	0.602*** (0.197)
Observations	197
R^2	0.477
Note:	*p<0.1; **p<0.05; ***p<0.01

17

SUPPLEMENTARY TABLES SECTION 2

17.1 COMPENSATION POLICIES EXPERIMENT 6

Table 17.1: Always Acceptable Cluster ANOVA following an Extent (2) x Amount (2) x Procedure (3) x Special (3) within subject design.

	SS	DF	MS	F	p	Î·2
Intercept	16760	1	16760	739,4	0	0,99
Extent(E)	3	1	3	3,6	0,1	0,34
Amount(A)	10	1	10	1,8	0,22	0,21
Procedure(P)	34	2	17	1,8	0,2	0,2
Special(S)	1	2	1	0,3	0,74	0,04
E*A	5	1	5	7	0,03	0,5
E*P	2	2	1	0,5	0,59	0,07
A*P	1	2	1	0,4	0,71	0,05
E*S	10	2	5	3,8	0,05	0,35
A*S	0	2	0	0,1	0,95	0,01
P*S	3	4	1	0,6	0,68	0,08
E*A*P	3	2	2	0,9	0,43	0,11
E*A*S	0	2	0	0	0,98	0
E*P*S	5	4	1	1	0,41	0,13
A*P*S	7	4	2	1,4	0,26	0,17
E*A*P*S	3	4	1	0,6	0,7	0,07

17.2 COMPENSATION POLICIES EXPERIMENT 7

Table 17.2: Distribute and Compensate Cluster ANOVA following an Extent (2) x Amount (2) x Procedure (3) x Special (3) within subject design.

	SS	DF	MS	F	p	Î·2
Intercept	42718	1	42718	3281,5	0	0,99
Extent (E)	951	1	951	64,1	0	0,66
Amount (A)	48	1	48	8,5	0,01	0,2
Procedure(P)	170	2	85	14	0	0,3
Special (S)	766	2	383	26,5	0	0,45
E*A	7	1	7	3,5	0,07	0,1
E*P	8	2	4	1,4	0,26	0,04
A*P	0	2	0	0,1	0,89	0
E*S	30	2	15	6,6	0	0,17
A*S	0	2	0	0	0,95	0
P*S	3	4	1	0,4	0,81	0,01
E*A*P	7	2	4	2,1	0,13	0,06
E*A*S	5	2	3	1,1	0,34	0,03
E*P*S	10	4	2	1,1	0,35	0,03
A*P*S	6	4	1	0,6	0,65	0,02
E*A*P*S	7	4	2	0,9	0,48	0,03

Table 17.3: Egalitarians Cluster ANOVA following an Extent (2) x Amount (2) x Procedure (3) x Special (3) within subject design

	SS	DF	MS	F	p	Î·2
Intercept	14104	1	14104	1058	0	0,99
Extent (E)	4634	1	4634	340,5	0	0,96
Amount (A)	0	1	0	0,1	0,8	0
Procedure(P)	156	2	78	12,9	0	0,45
Special (S)	129	2	65	14,6	0	0,48
E*A	1	1	1	0,2	0,67	0,01
E*P	27	2	14	2,1	0,14	0,11
A*P	1	2	1	0,9	0,43	0,05
E*S	13	2	7	3,5	0,04	0,18
A*S	1	2	0	0,4	0,66	0,03
P*S	3	4	1	0,3	0,87	0,02
E*A*P	1	2	1	0,4	0,66	0,03
E*A*S	1	2	0	0,1	0,89	0,01
E*P*S	4	4	1	0,7	0,58	0,04
A*P*S	6	4	1	0,8	0,53	0,05
E*A*P*S	1	4	0	0,1	0,99	0

Table 17.4: Legalists Cluster ANOVA following an Extent (2) x Amount (2) x Procedure (3) x Special (3) within subject design

	SS	DF	MS	F	p	Î·2
Intercept	5413	1	5413	260	0	0,97
Extent (E)	333	1	333	28,3	0	0,76
Amount (A)	0	1	0	0	0,88	0
Procedure(P)	984	2	492	28,3	0	0,76
Special (S)	58	2	29	6,3	0,01	0,41
E*A	1	1	1	1,6	0,24	0,15
E*P	102	2	51	13,3	0	0,6
A*P	0	2	0	0	0,99	0
E*S	2	2	1	0,9	0,41	0,09
A*S	0	2	0	0,3	0,77	0,03
P*S	19	4	5	2,5	0,06	0,22
E*A*P	1	2	0	0,4	0,69	0,04
E*A*S	2	2	1	0,6	0,55	0,06
E*P*S	12	4	3	1,5	0,22	0,14
A*P*S	2	4	0	0,3	0,86	0,03
E*A*P*S	2	4	1	0,3	0,86	0,03

Table 17.5: Always Acceptable Cluster ANOVA following a Cluster (4) x Extent (2) x Amount (2) x Procedure (3) x Special (3) within subject design.

	SS	DF	MS	F	p	Î·2
Intercept	36552	1	36552	1225,2	0	0,99
Special (S)	1	1	1	0,2	0,69	0,01
Extent (E)	45	2	22	1,4	0,28	0,1
Procedure(P)	14	1	14	1,8	0,21	0,13
Amount (A)	7	2	4	1,3	0,29	0,1
S*E	3	2	2	0,8	0,44	0,07
S*P	2	1	2	1	0,35	0,07
E*P	9	2	4	2,1	0,14	0,15
S*A	2	2	1	0,6	0,56	0,05
E*A	6	4	2	1,9	0,13	0,14
P*A	2	2	1	0,7	0,51	0,06
S*E*P	6	2	3	1,5	0,24	0,11
S*E*A	1	4	0	0,5	0,71	0,04
S*P*A	1	2	0	0,5	0,64	0,04
E*P*A	6	4	2	2	0,11	0,14
S*E*P*A	1	4	0	1,2	0,33	0,09

Table 17.6: Egalitarians Cluster ANOVA following a Cluster (4) x Extent (2) x Amount (2) x Procedure (3) x Special (3) within subject design.

	SS	DF	MS	F	p	Î·2
Intercept	8498	1	8498	732,7	0	0,99
Special (S)	636	1	636	25,4	0	0,7
Extent (E)	676	2	338	43,6	0	0,8
Procedure(P)	524	1	524	19	0	0,63
Amount (A)	23	2	11	3,8	0,04	0,26
S*E	19	2	9	2,5	0,11	0,18
S*P	40	1	40	20,1	0	0,65
E*P	28	2	14	4,5	0,02	0,29
S*A	3	2	2	0,9	0,44	0,07
E*A	21	4	5	4,5	0	0,29
P*A	6	2	3	1,3	0,29	0,11
S*E*P	5	2	3	1,3	0,29	0,11
S*E*A	4	4	1	0,4	0,78	0,04
S*P*A	2	2	1	0,4	0,68	0,03
E*P*A	4	4	1	0,6	0,69	0,05
S*E*P*A	3	4	1	0,3	0,86	0,03

Table 17.7: Distribute and Small amounts Cluster ANOVA following a Cluster (4) x Extent (2) x Amount (2) x Procedure (3) x Special (3) within subject design.

	SS	DF	MS	F	p	Î·2
Intercept	30160	1	30160	797,5	0	0,97
Special (S)	181	1	181	6,8	0,02	0,22
Extent (E)	952	2	476	35,3	0	0,6
Procedure(P)	435	1	435	10,3	0	0,3
Amount (A)	328	2	164	14,9	0	0,38
S*E	13	2	6	2,2	0,12	0,08
S*P	8	1	8	3,9	0,06	0,14
E*P	2	2	1	0,4	0,65	0,02
S*A	0	2	0	0	0,97	0
E*A	16	4	4	2	0,1	0,08
P*A	15	2	8	4,5	0,02	0,16
S*E*P	1	2	1	0,3	0,74	0,01
S*E*A	7	4	2	0,7	0,58	0,03
S*P*A	7	2	4	1,4	0,26	0,05
E*P*A	1	4	0	0,1	0,96	0,01
S*E*P*A	5	4	1	0,5	0,74	0,02

Table 17.8: Depends on Amount Cluster ANOVA following a Cluster (4) x Extent (2) x Amount (2) x Procedure (3) x Special (3) within subject design.

	SS	DF	MS	F	p	Î·2
Intercept	2390	1	2390	84,3	0	0,91
Special (S)	0	1	0	0,3	0,57	0,04
Extent (E)	29	2	15	3,3	0,06	0,29
Procedure(P)	0	1	0	0,2	0,64	0,03
Amount (A)	530	2	265	7,4	0,01	0,48
S*E	3	2	2	5,4	0,02	0,4
S*P	1	1	1	1,6	0,24	0,17
E*P	1	2	0	0,2	0,8	0,03
S*A	2	2	1	2,4	0,12	0,23
E*A	15	4	4	2,9	0,04	0,27
P*A	2	2	1	2,1	0,16	0,2
S*E*P	1	2	1	1	0,38	0,11
S*E*A	4	4	1	1,6	0,2	0,16
S*P*A	0	2	0	0,1	0,88	0,02
E*P*A	1	4	0	0,8	0,56	0,09
S*E*P*A	3	4	1	1,2	0,33	0,13

18

INFORMATION INTEGRATION THEORY

In information integration studies the common methodology directly measures respondents answers to an orthogonalized set of stimuli. Asking participants directly about their judgments is in strong contrast to most studies in social psychology in which the manipulated variables are hidden to respondents. Consequently, this methodology is less prone to the experimenter bias. Said in another way it is particularly important in this methodology that the participants do not grow suspicious, and that there is absolute transparency about the aims of the person who is studying them.

I have long thought about information integrations' place in psychological science. It seems to me to be a holistic approach that embraces the thought process in a comfortable way. Comfortable, because it provides the researcher with a "clef en main" solution. The high degree of consistency between theory and methodology is probably its greatest strength and leaves the researcher fully equipped, if he is willing to adopt IIT. The following paragraphs outline information integrations conceptual and methodological foundations in greater detail.

This unified approach to social cognition has to be distinguished from previously discussed approaches in that it operates with validated scale values of the stimuli presented to participants. This is why the theory is also referred to as functional measurement. Functional theory of cognition aims mainly at being a theory of judgment in everyday life (Anderson, 2008, 1982, 1991). Its primary purpose is to explain the rules of judgments that we use in every day life. Its particularity is that it is not based on a principle of consistency of respondents but rather relies on algebraic models for the combination of stimuli.

Since there are many examples of situations of judgment there are as many applications of the theory, in some way they are endless. IIT has been effectively applied to moral cognition such as the decision to end lives (Guedj et al., 2005; Teisseyre et al., 2005; Frileux, Lelièvre, Muñoz Sastre, Mullet, & Sorum, 2003; Frileux et al., 2004) and conflict resolution (Kpanake & Mullet, 2011). Before applying functional theory of cognition to the moral issue of socially acceptable remuneration systems in Chapter 5, this section presents

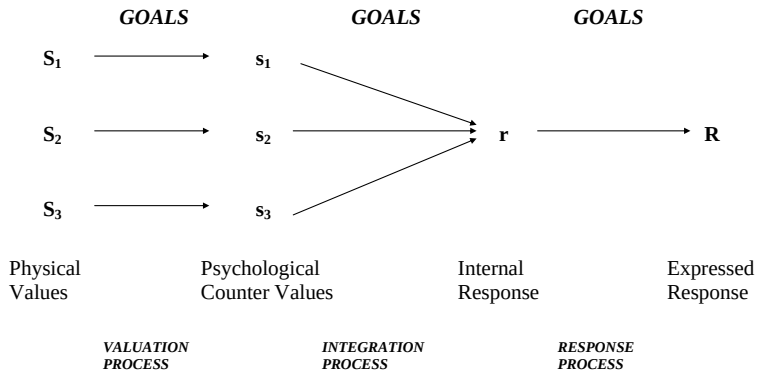


Figure 18.1: Information Integration Model

its theoretical foundations and basic structure as laid down in Anderson (2001) and Cadet and Chasseigne (2009).

IIT considers that psychological activity is fundamentally concerned with judgments and the idea that it is an activity of information integration. This idea can also be found in the writings of other early authors: Janet (1889) for example, calls this phenomenon "psychological aggregation" and claims it to be the central process of mental activity. For Janet, the human brain produces, continuous synthesis of multiple mental sensations (and associated thoughts) that it receives (or generates).

18.1 BASIC CONCEPTS

Figure 18.1 shows the graph of IIT proposed by Anderson (1981). It shows a field of external stimuli (S_1, S_2, ...) which undergoes three successive operations: (a) The valuation process that matches a given stimulus S_1, a psychological representation s_1, (b) an integration process that aggregates these psychological representations into a default answer, r, and (c) a response process which makes the implicit response observable. The information integration graph explicitly includes the initial state and the goals of the person. The three operators Valuation, Integration and Response are governed by the goals of the person. Thus, the graph illustrates two key aspects of judgments: Possessiveness and multi-determination.

The concept of *valuation* expresses the contextualized and purposeful nature of every judgment. The concept of valuation is not an assessment or an

estimate of an external stimulus (S_1) by the subject, but the creation of a subjective value. Valuation is the process that regulates the creation of a representation. A creation operating from an external source based on the purpose and personal experiences accumulated by the person who judges. This idea of integration valuation is close, for example, Janet (1889) who argued that current sensations do only make sense if they are related with elements from past experiences.

The valuation process creates values that are in a format ready to be integrated. The parameters depend on the dimension on which the judgment is made (the particular purpose assigned in the task) and the motivational and/or emotional state of the person who judges. This means that it is not a constant of the stimulus S. The valuation process involves external stimuli S_1, S_2, S_3, which can be physical or social and gives them a psychological sense, which in turn is translatable in terms of scale values (values scales, s_1, s_2, s_3).

Of course the external stimuli (S_i) can be very different, and might imply various scales and shapes. For example, suppose that S_1, S_2, S_3 are the elements of a situation to buy a coffee bag. S1 could be the taste of the coffee: "Very good". S2 could be the price of the coffee bag: Price high. S3 may be that the producers are remunerated in a fair trade scheme (social responsibility): It has a fair trade label. These three stimuli are incommensurable, they are expressed along different scales in nature (taste, price and social responsibility) and their metric. A prerequisite for the integration within the framework of information theory is to ensure the commensurability of these stimuli. This is achieved through translation of each stimulus along a common scale. In this particular case the common scale is imposed by the situation: the goal is to buy a coffee bag. The scale along which a response is expressed needs to be a scale of attractiveness of the product to the consumer.

The stimulus "very good" (S_1) will be associated with a certain degree of attractiveness (s_1): High. Similarly, the two stimuli "very expensive" and "very responsible towards producers" (S_2 and S_3) are associated with two other values (s_2 and s_3) in terms of degree of attraction: Low and moderate. The functions that connect S_1 - S_3 to s_1 - s_3 are called value functions. The forms of these functions can be very different. In the example, the functions f_1 and f_3 are monotone increasing functions: The better the taste and the more socially responsible, the greater the attraction towards the coffee bag. The f_2 function on the other hand is a decreasing monotone function. The higher the price, the lower the attraction towards the coffee bag. But in general, it is not excluded that some functions are logarithmic or have a threshold (Muñoz Sastre, Mullet, & Sorum, 1999). Concerning price, for example, it is possible that beyond a certain value of S_2, the psychological representation's value s_2 does impact more. But below this value, s_2 could be linearly related to S_2.

After the process of valuation which assures the commensurability of all stimuli (S_1, S_2, S_3 in the example), the subjective values s_1, s_2, s_3 are integrated to produce a unified response within the person, which is called implicit response r. The *integration* process is thus responsible for the production of a multiply determined singular response. The concept of integration expresses the multi-determined nature of every judgment.

During integration, scale values s_i scan receive different weights w_i, reflecting the different importance that a person grants to different sources of information. In the example the weight w_1, associated with the scale value of taste may be twice the weight w_2, associated with the scale value of price. Weight can also be zero, that of social responsibility, for example, if one considers that business should not care for fair producer remunerations a the psychological representation of the fair trade label will not be weighted in the purchase of a coffee bag.

In some cases, the weight w_i is independent of the scale value s_i. In other cases not and a different weight, w_i, corresponds to each value s_i. Imagine for example, when the values S_1 and s_1 (taste) are very low, then the weight of the scale value corresponding to this stimulus is very important. And this independently of the price or social responsibility of the coffee, if s_1 is low, that means the coffee really tastes disgusting, its degree of attractiveness remain very low in general.

Conversely, when the values S_1 and s_1 are medium, then the weight of the taste stimulus might be more limited and price and social responsibility will be more decisive. During integration, scale values can play different roles. In some cases, integration by summing, averaging or subtraction, the role is the same: One scale value is simply added or subtracted to another. In other cases, integration by multiplication, the role is different since a value can act as the weight of another value.

In a third step, following the evaluation and integration processes, the intrinsic response r is converted into an observable response R by an operator response during the *response* process. An observable response may be a facial expression, a physiological, motor, or verbal response. In experimentation it is most likely to be the selection of a point on a judgment scale. The function that links R and r is called response function or motor function. When this function is linear, the study of the integration process is greatly simplified. This is not always the case.

18.2 RULES OF INFORMATION INTEGRATION

At least in appearance, the *additive rule* is, the most basic rule in IIT. It assumes that during the process of information integration leading to a judgment, the various pieces of information simply add up their effects. In other words, this rule assumes that the effect each piece of information has on

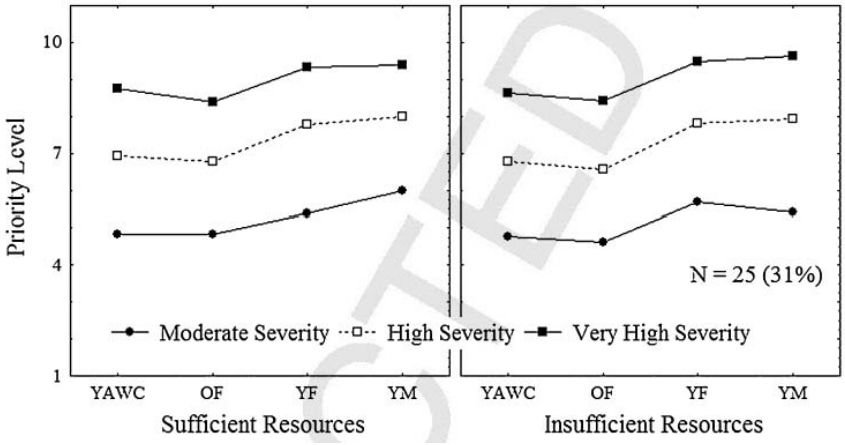


Figure 18.2: Example of the characteristic shape of the additive rule.

the final judgment is independent of the effect of all other information, i.e. the context in which the judgment is made, and the element is processed.

Figure 18.2 shows the characteristic shape of an additive rule found in Nann et al. (2012). It is a situation were Cambodian patients ad health professionals judge the priority of HIV-infected in relation to the allocation of antiretroviral drugs. The vertical axis is the priority level judgment. On the horizontal axis are the patient's family responsibilities (young father, aged about 35, with four young children; young male patient, aged about 35, without children; older father, aged about 65, with adult children; or young mother, aged about 35, with four young children). The different lines represent the severity of infection (moderate severity level; high severity level; very high severity level). The two graphs represent the financial difficulties of the family (can sustain itself versus cannot sustain itself).

Each point on the graph corresponds to a unique configuration of information, that is to say a concrete situation of judgment. For example, the information judged for the top left point on the left graph is sufficient financial resources, young father with four children and very high severity. The approximate parallelism of the curves demonstrates the additivity of the effect of severity.

The logic of the test of additivity of effects is as follows. Let 1 and 3 be the subjective counter values, s_i (also called scale values) corresponding to the modalities of the first factor S_i(family responsibilities) and 1 and 3, are the subjective counter values corresponding to the modalities of the second factor (severity of infection). These values are derived from the previously described valuation process. For simplicity's sake we shall assume equal weight of the two factors and two modalities for each factor. If we fix the weight of each factor w = 2, we obtain the following four values: $(2x1) + (2x1) = 4; (2x1) + (2x3) = 8; (2x3) + (2x1) = 8; (2x3) + (2x3) = 12$. The differences between the four values taken two by two are constant:

$12 - 8 = 4$ and $8 - 4 = 4$. The parallel curves express nothing other than this constancy. If an experiment is based on the principles described above, and if one organizes the resulting judgments as in figure 18.2 and if the curves are parallel, then it is fair to say that the judgment rule used is additive. Additive judgments often combine with other rules and are common in everyday judgments, and moral judgment (Muñoz Sastre et al., 2007; Kpanake & Mullet, 2011; Frileux et al., 2004; Muñoz Sastre et al., 1999).

The disjunctive rule is a bit more complex than the additive rule. It assumes that during the process of information integration, the various pieces of information do not simply add up their effects. In other words, this rule assumes that the effect of each piece of information on the final judgment depends on one or several other pieces of information that form the context in which the judgment is made, i.e. in which this particular element is processed. This rule assumes that the weight of a piece of information during the process that leads to a judgment is proportional to the relative value of this piece of information.

The right panel of figure 18.3 illustrates the disjunctive rule. In this situation, soccer experts judged the appropriateness of a strategy that consist in quickly restarting to play towards the end of the game in order to surprise the adverse team (Rulence-Pâques, Fruchart, Dru, & Mullet, 2005). The vertical axis is the judgments of appropriateness. On the horizontal axis is the score of the match (win, tie or loose). The different lines represent the numerical relationship of players in the team to the opponents players (superior, equal, inferior). Each point on the graph corresponds to a specific configuration information, or in other word to a concrete judgment situation: The lower left point, for example, represents a judgment situation where the team is about to win the game, but in numerical inferiority. The upper right would be a team that is about to loose the game and in numerical superiority. The curves are not parallel, they converge towards the right. This demonstrates the disjunctive nature of the judgments.

The logic behind the disjunctive rule is as follows. In the previous section, we assumed that 1 and 3 were subjective counter values corresponding to the two modalities of each of the two factors considered. The values corresponding to the combinations of the two factors, when applying an additive model and assuming equal weights of 2 are 4, 8, 8, and 12. The differences between the four values taken two by two are constant. In contrast, within the disjunctive model the weight of a piece of information depends on the value of at least one other element. Think of the case of two values that can be considered equal (loosing the game and being numerically inferior or winning the game and being numerically superior), then under the disjunctive rule, the weight of the two factors are identical. As in the previous example we shall assume equal weight of the two factors and two modalities for each factor. Think of the case of two values that can be considered different (loosing the game and being numerically superior or winning the game and being numerically inferior), then the weight of the two factors

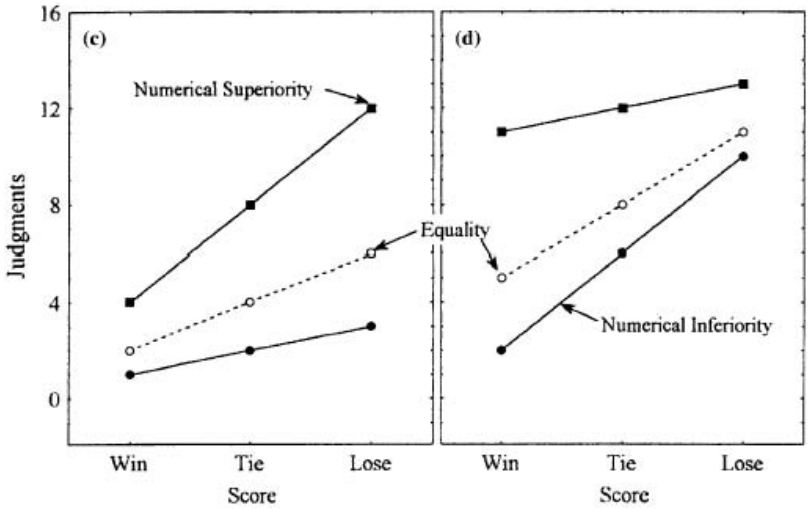


Figure 18.3: Example of the characteristic shape of the conjunctive rule (left panel) and the disjunctive rule (right panel).

will be different. The application of the disjunctive rule assumes that the element with the smallest value also receives the smallest weight, which we will set to 1, and the element with the highest value receives the greatest weight that we will set to 3.

If we use the same vales as in the previous example, 1 and 3, and attribute them to the game score and numerical proportion, a simple calculation result in four values: $(2 * 1) + (2 * 1) = 4, (1 * 1) + (3 * 3) = 10, (3 * 3) + (1 * 1) = 10, (2 * 3) + (2 * 3) = 12$. The differences between the four values taken in pairs are not constant: $12 - 10 = 2$ and $10 - 4 = 6$. The non-parallel curves in Figure 18.3 expresses nothing other than this non-constancy. The fan-shaped form of the graph, open to the left, expresses the disjunctive rule. If an experiment is based on the principles described above, and if one organizes the resulting judgments as in figure 18.3, and if there is a convergence of the curves to the right, then it is reasonable to assert the prevalence of a disjunctive judgment rule.

The conjunctive rule is symmetrical to the disjunctive rule. Like the disjunctive rule, the conjunctive rule assumes that during the process of information integration that leads to the judgment, the various pieces of information do not simply add up their effects. Unlike the disjunctive rule, the conjunctive rule assumes that the weight gained by one information during the process is inversely proportional to the value of this element.

Examples of the conjunctive rule can be found in the left graph of Figure 18.3 and in Figure 18.4. The right panel of Figure 18.4 represents a situation in which people were estimating the intention to migrate to another country based on the difference in wages between countries of origin and host countries and the ease with which a job can be found in the host country (Neto &

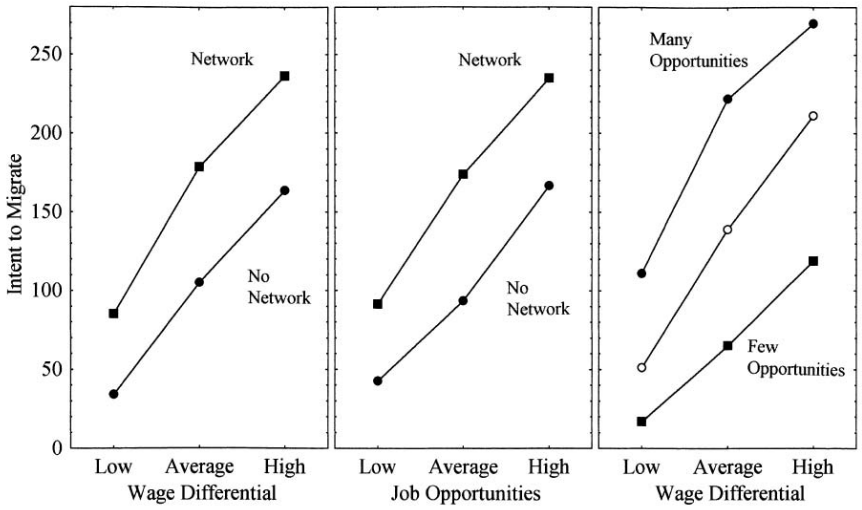


Figure 18.4: Example of the characteristic shape of the conjunctive rule (left panel).

Mullet, 1998). The vertical axis plots the judgments of intention. The horizontal axis plots three levels of wage differential: Low, average and high. The three curves correspond to three levels of job opportunities: Few, average and many opportunities. Again, each point on the graph corresponds to a configuration of different information, that is to say to a concrete judgment situation. The lower left point represents the situation of few job opportunities and a low wage differential between the two countries, whereas the upper right point represents a situation in which many job opportunities and a high wage differential are present. The three curves are not parallel and diverge to the right. This shows the conjunctiveness of the effects of each variable in the judgment.

The logic of the conjunctive rule is the opposite of the disjunctive rule. Under the conjunctive model, the weight of a piece of information also depends on the value of at least one other component. Think of the case of two values that can be considered identical (rater low wage differential and few opportunities to find an employment or an attractive wage differential and a good chance of finding work), then in the case of a conjunctive rule the weight of both factors will be identical in these contexts. Again we shall we fix them to 2. Now Imagine the case of two values that can be considered as different (an attractive wage differential and few job opportunities or an unattractive wage differential and pretty good job opportunities), then the weight of the two factors will be different. The application of the conjunctive rule assumes that the element with the smallest value receives the greatest weight, we shall set it to 3, and the element with the largest value receives the smallest weight, which we shall set to 1.

If we now affect the values 1 and 3 (as in the previous example) to the two factors, job opportunity and wage differential, a simple calculation

is enough to obtain the four values that correspond to the data points: $(2x1) + (2x1) = 4, (3x1) + (1x3) = 6, (1x3) + (3x1) = 6, (2x3) + (2x3) = 12$. Again, the differences between the four values taken in pairs are not constant: $12 - 6 = 6 and 6 - 4 = 2$. The non-parallelism of the curves in Figure 18.4 expresses this non-constancy. The fan-shaped form of the graph, open to the right, expresses the conjunctive rule. If an experiment is based on the principles described above, and if one organizes the resulting judgments as in figure 18.4, and if there is a divergence of the curves to the right, then it is reasonable to assert the prevalence of a conjunctive judgment rule.

The additive, disjunctive and conjunctive rules are appear to be relatively simple. Another question of interest for models of cognitive algebra is the operator used to generate the pattern. Consider for example the additive rule, illustrated by the parallelism of the curves in Figure 18.2. There are two possible operations that can result in such a pattern. We have already considered the first one, to sum up the equally heightened psychological counter values, but there is also the possibility to obtain the same parallelism through averaging.

To differentiate between the two calculations researchers add a supplementary factor to the experimental design. For the sake of simplicity I shall omit the mathematical demonstration, and admonish the reader to Cadet and Chasseigne (2009). The basic idea is that a variation in the third factor alters the steepness of the parallel curves in the case of averaging but not in the case of summation.

But the integrative principle of different information can also be multiplication. In the case of this principle on of the pieces of information (experimental factor) determines the weight taken by another information, while in all previous rules every piece of information received a particular weight, invariable in the case of the additive rule and variable in the case of disjunctive and conjunctive rules.

It is possible to identify the multiplication principle in experimental designs with factors that have more then two modalities. Again I request the reader to accept a simple description of the graphical interpretation and invite the reader interested in the formal proof to consult Cadet and Chasseigne (2009). The particularity of multiplicative processes is that the extension of the lines of all three modalities of a factor have a common crossing point. This common crossing is typical for multiplicative operations and does not occur in other integration principles.

IIT's methodological strength is that it allows the psychological researcher to work closely with his object, namely the participants thought process. The graphical interpretation (with sound mathematical foundations as described above) allows for immediate feedback on the question of interest but also on the quality of materials and the procedural precautions taken during the experimental phase. In other words, the researcher is somewhat guided

towards improved questioning, design and methodology through the participants answers.

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COLOPHON

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DECLARATION

I declare that this doctoral dissertation, which I submit for examination in consideration of the award of a PhD is my own personal effort. Where any of the content presented is the result of input or data from a related collaborative research program this is duly acknowledged in the text such that it is possible to ascertain how much of the work is my own. I have not already obtained a degree elsewhere on the basis of this work. Furthermore, I took reasonable care to ensure that the work is original, and, to the best of my knowledge, does not breach copyright law, and has not been taken from other sources except where such work has been cited and acknowledged within the text.

Toulouse, October 16, 2014

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Abstract

This doctoral dissertation addresses the problem of decisions involving economic and moral values. It reviews moral decisions in the economic domain, focused on the situations of empirical interest in this dissertation (Cahpter 2). Chapter 4 asks if SRI can help to restore trust in mutual funds. Main results suggest that the positive effects of SRI techniques are highly dependent on the similarity in values between the individual investor and a given fund. Chapter 5 draws a portrait of laypersons' acceptability of a company's executive compensations and general remuneration policies. The main result identifies four clusters of individuals, who decide based on personal views about the justice of remunerations. Chapter 6 introduces an experimental game (the conceal-reveal dilemma) in which people have the choice between revealing and concealing benefits that others deem as undeserved. The main result is that people rely on decision strategies other than cost-benefit analysis. Consequently, appealing to peoples' moral values is an alternative to financial incentives in situations with undeserved benefits. The last two chapters (Chapter 7 and 8) discuss the theoretical and practical implications of our empirical findings.

Keywords: *socially responsible investment, decision making, information integration theory, experimental game, value similarity, trust*

Résumé

Cette thèse concerne des décisions dans des situations complexes qui impliquent des valeurs économiques et moraux. Chapitre 2 introduit les décisions morales en contexte économiques en proposant les situations d'un intérêt empirique. Le sujet du chapitre 4 est de restaurer la confiance dans les fonds communs de placement. Les principaux résultats suggèrent que les effets positifs de l'approche ISR sont tributaires de la similarité des valeurs de l'investisseur individuel avec celles du fonds. Chapitre 5 dresse un portrait de l'acceptabilité sociale de la rémunération des dirigeants et celle des politiques de rémunération générales d'une entreprise. Le principal résultat indique l'existence de groupes de personnes qui sont jugent a partir de points de vue personnels sur la justice des rémunérations. Chapitre 6 introduit un jeu expérimental (le dilemme conceal-reveal) qui permet l'étude des personnes ayant le choix entre révéler et cacher des avantages qui seraient jugés comme non méritée par d'autres. Le résultat principal est que les choix ne reposent pas sur une analyse coÃ»ts-bénéfices. En conséquence, faire appel aux valeurs moraux peut être une alternative intéressante dans de telles situations. Enfin, les deux derniers chapitres (Chapitre 7 et Chapitre 8) des implications théoriques et pratiques de ces résultats empiriques.

Mots-clefs: *investissement socialement responsable, prise de décision, théorie fonctionelle de la cognition, jeu experimental, similarité de valeurs, confiance*