

'Communication of scientific research shows the organization aims to achieve its goals'

How science communication can improve relationships between the Netherlands Leprosy Relief and their donors

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'Most of the fundamental ideas of science are essentially simple, and may, as a rule, be expressed in a language comprehensible to everyone'.

- Albert Einstein -

Preface

I started this thesis with a quote of Albert Einstein, to express my opinion that even how fundamental and technical scientific research might be, I believe it can always be communicated in a language comprehensible for all people. During this study I conducted interviews with donors and researchers, which made me aware of how interesting scientific research on leprosy is, and how important it is to communicate this research in a language understandable to all people. When scientific research can be made comprehensible for all people, it provides them an opportunity to go into dialogue with the researchers, so they can exchange knowledge and learn from each other. Besides, this study has shown that science communication has the potential to support relationship building between charity organizations and their donors.

The last six months I conducted this study on how science communication can improve relationships between the Netherlands Leprosy Relief and their donors. Carrying out this study enriched my knowledge, skills and experience. Besides, I realized how much I appreciated the help, support and advice of other people. Therefore, in this preface I would like to thank everyone who supported me during this period.

First of all I want to thank the Netherlands Leprosy Relief for providing me the opportunity to carry out this study. I want to thank them for providing me a workplace at the office, and become part of their organization for a period of six months. Through working at the office I learned more about the functioning of non-profit organizations. Besides, I realized how important it is there is an organization that aims to eliminate leprosy from this world, because there are still so many people suffering from this disease. I want to thank all the people of the Netherlands Leprosy Relief for providing me information, support and advice. I want to thank the colleagues for the nice conversations we had during the afternoon walks and coffee breaks. I want to give a special thanks to Wiesje for her willingness to read my thesis and provide me with useful feedback, advice and insights.

Besides the support from the people of the Netherlands Leprosy Relief, I would like to give a special thanks to my supervisor Wim van Brakel. I want to thank him for providing me quick and useful feedback. I want to thank him for always taking the time to answer my questions and help me to solve problems. Besides, I would like to thank my supervisor Hedwig te Molder for the meetings we had. During these meetings she helped me stay close to the aim of my research study and keep me on track. I would like to thank her for her feedback and useful advice.

Last but not least, I would like to thank all the donors and researchers who were willing to participate in the interviews. I want to thank them for the interesting conversations, which broadened my perspective.

A final thanks to all the people from the Netherlands Leprosy Relief, the donors, researchers, my family, friends and my boyfriend who supported me during this study. With your help, advice and support I was able to complete this study successfully.

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Summary

The Netherlands Leprosy Relief (NLR) is one of the major organizations in the world supporting scientific research on leprosy. However, they experience difficulties in communicating scientific research findings to their donors. The scientific research is often of high technical level and hard to understand for lay people. The problem experienced by NLR, was the main reason for starting this study. For this study there is chosen to look at communication from a transactional approach, thereby taken into account the importance of relationships. Therefore, the main research question of this study was formulated as follows: *'How can the Netherlands Leprosy Relief improve relations with their donors through communicating scientific research findings on leprosy?'*.

The theoretical and conceptual framework used in this study was based on the 'identity salience model of non profit relationship marketing success' of Arnett (2003). This model was used to study how science communication can contribute to an improved relationship between NLR and their donors. To find an answer on the main research questions, semi-structured interviews were conducted with 21 notarial donors and 9 researchers. In addition an online survey was completed by 75 individual donors.

The results showed an interesting difference in perception between donors and researchers, regarding scientific research on leprosy. While the researchers believed scientific research is necessary because there is still so much unknown, the donors questioned the need to conduct scientific research; in their perception everything about leprosy is already known. Furthermore, the results showed donors and researchers believed science communication should be perceived as a form of reciprocity. Reciprocity can be facilitated by using participatory methods, like discussion groups, to communicate about science. Dialogue between researchers, donors and NLR creates space for learning and exchanging knowledge. The opportunity to participate in discussions and have personal contact with researchers and employees of NLR has the potential to increase feelings of involvement among donors and stimulates promoting NLR to others. The findings showed donors confidence in NLR is based on a variety of reasons, like not hearing negative publicity, or knowing NLR aims to achieve its goals. Researchers and donors both believed NLR should profile itself more with scientific research and seek publicity. Visibility of NLR in the media increases identification of donors with NLR and is likely to result in promoting behaviour. Whether science communication leads to an increase in satisfaction remains unclear, due to a difference in perspective between individual and notarial donors on the need to receive information on scientific research.

First, it can be concluded that a lack of communication on scientific research seems to influence the perspectives of donors on the necessity and usefulness of scientific research. Therefore, NLR should invest more effort in communicating the need to conduct scientific research on leprosy to the donors. Second, showing reciprocity through participatory science communication is likely to contribute to improved relationships between NLR and their donors. Dialogue on scientific research creates opportunities for donors, NLR and researchers to exchange knowledge and learn from each other. Third, NLR should enhance trustworthiness, by paying attention to the donors concerns and listen to them, which might result in an improved relationship. Lastly, NLR should put more effort in increasing their visibility in the media, which results in donor identification and promoting behaviour.

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1. Introduction

This study was conducted as part of the Master Applied Communication Science of Wageningen University, and is carried out in assignment of the Netherlands Leprosy Relief (NLR). This study explored the role of science communication in the relationship between the Netherlands Leprosy Relief and their donors. This chapter will first provide information on the Netherlands Leprosy Relief. Next, a description will be given of the cause, prevalence, treatment and impact of leprosy. Thereafter, general characteristic of the donors of NLR will be described, followed by an explanation of scientific research supported by NLR. This chapter will end with a description of the problem statement, the main research question and objective.

1.1. Netherlands Leprosy Relief

The Netherlands Leprosy Relief (NLR) was founded in 1967. Their vision is a world where the continued suffering, caused by leprosy, no longer exists. NLR is a non-profit organization, which is entirely dependent on grants and revenues from private contributors¹. NLR is established in the Netherlands and consists of a Board, Director and a Project, Finance and Fundraising department. NLR works in 16 countries in South America, Africa and Asia, where they support national health services and work with international partners in leprosy control and rehabilitation. Local health services are strengthened to detect patients in time and to ensure they receive proper treatment and rehabilitation, if necessary. Besides the focus on physical health, NLR also aims at social rehabilitation of ex-patients and patients with other disabilities. To ensure quality of their projects NLR receives ongoing advice of 'Technical Advisors' from the Royal Tropical Institute (Leprastichting, 2011).

1.2. Leprosy

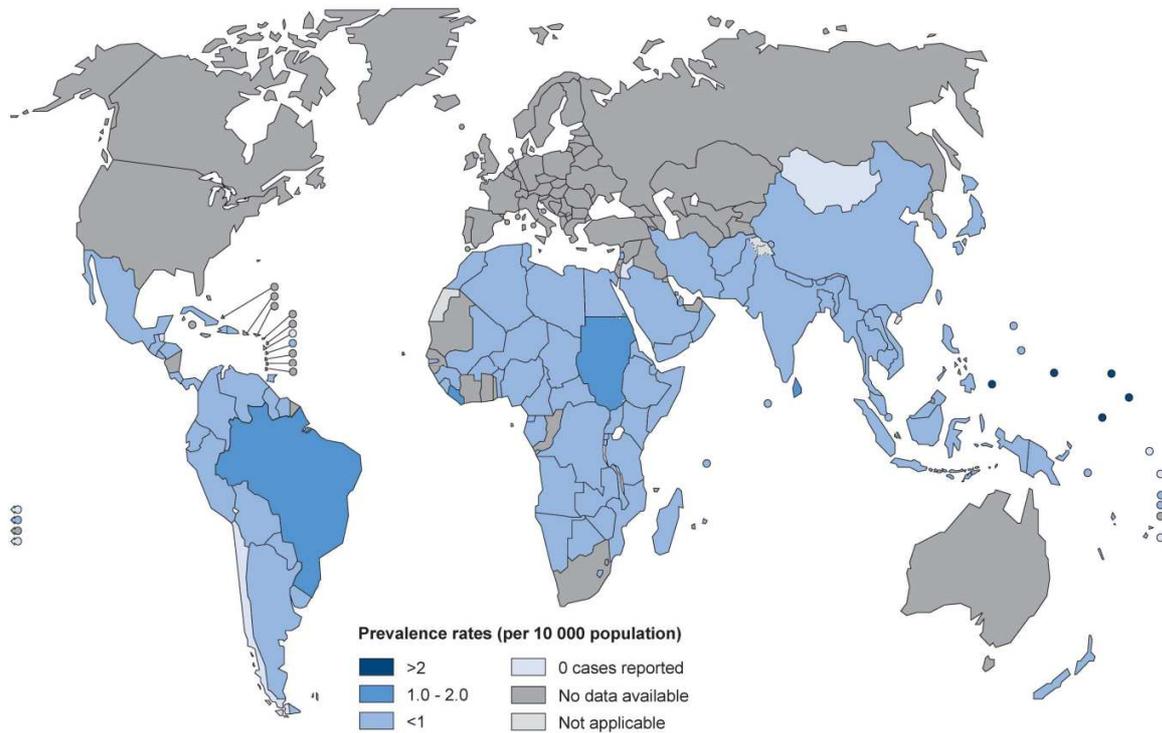
Leprosy is caused by a slow growing intracellular bacterium, called *Mycobacterium Leprae*. The bacterium causes an infection of the skin and peripheral nerves, which results in sensory and motor impairments. The bacteria divides itself only once every two weeks. Therefore, the incubation period of leprosy is five years and it can take even 20 years for symptoms of the disease appear. The bacterium is transmitted via droplets from the nose and mouth of untreated patients (Leprastichting, 2012; World Health Organization, 2012b) .

1.2.1. Prevalence of leprosy

Nowadays, leprosy is still common in developing countries in South America, Africa and Asia (see Figure 1). At the beginning of 2010 the global prevalence of registered leprosy patients was 192,247. During the year 2010, 228,474 new leprosy patients were detected (Britton & Lockwood, 2004; World Health Organization, 2010; World Health Organization, 2011).

¹ Leprastichting (2006). NLR Policy Scientific Research 2007-2010.

Figure 1: Leprosy prevalence rates, January 2011 (World Health Organization, 2012a)



1.2.2. Treatment

Leprosy can be easily treated with a 6 or 12-month course of multi-drug therapy (MDT), which is a combination of the following three drugs: dapson, rifampicin and clofazimine. The multi-drug therapy is supplied free-of-charge by Novartis and is distributed by the World Health Organization; it kills the bacteria and stops transmission. However, if detection and treatment are delayed, the patient may already have developed impairments or deformities which cannot be cured anymore.

1.2.3. Impact

Nowadays, many leprosy patients still develop deformities, because of a delay in detection and treatment. Patients with deformities and impairments from leprosy are often stigmatised. Society perceives leprosy patients as contagious, cursed or sinful; therefore they are often excluded from society. Early detection and diagnosis is very important in order to prevent impairments, disabilities, and stigma to occur (Van Brakel, Voorend, Ebenso, Cross & Augustine, 2011).

1.3. NLR and its donors

For revenues, NLR is entirely dependent on donors and grants. The fundraising department of NLR recruits donors, maintains donor relations, provides information and develops campaigns. The 'Klepper' is a magazine published by NLR four times a year, and contributes to the largest share of income from fundraising activities. This magazine informs donors on recent projects supported by NLR. Furthermore, donors receive an annual report once a year, supplemented with a fundraising article or letter. Overall, NLR has 64.739 active donors on their files. Active donors are defined as people who have donated money in the last 12 months. The donors of NLR are mainly situated in the west, middle and north of the Netherlands. The majority of the donors are married and of Dutch

origin. A major proportion of the donors is aged 60 or above, which means that the population of donors is aging, indicating a need to attract new young donors. Many of the donors are religious, most of whom are reformed and Dutch reformed². Besides private revenues and grants, NLR also receives revenues from the National Postcode Lottery and capital funds. In addition, NLR has established an agreement with the Turing Foundation. The Turing Foundation is a registered charity, established in 2006, that wants to contribute to the elimination of leprosy as a disfiguring disease. In 2008, NLR and the Turing Foundation signed an agreement to cooperate in financing scientific research in the field of 'early diagnosis and treatment of leprosy'. This agreement states both parties will equally contribute to the costs of scientific research on leprosy³.

1.4. NLR and scientific research

NLR is one of the major foundations in the world supporting scientific research on leprosy⁴. Since their establishment, NLR decided to dedicate a percentage of the budget specifically to scientific research, in order to promote effectiveness and efficiency of leprosy control. Over the years, the budget for scientific research has increased. Nowadays, 10% of the annual budget, which is around €740,000, is available for scientific research². Each year NLR receives proposals from research institutes that wish to qualify for a grant. To help in decision making, the Board of NLR and the Head of Programmes Department receive advice from the Scientific Research Committee, which consists of six independent experts. The Scientific Research Committee was founded in 1988 and evaluates and assesses all research proposals which are submitted to NLR, for quality and feasibility. Since then, they advise the Board and the Head of Projects Department on which research proposals are eligible for grants⁵. The Scientific Research Committee meets twice a year, in autumn and in spring. The autumn meeting is devoted to the evaluation of submitted research proposals, and to advise the board on grants to be given for the following year. The meeting in spring is devoted to discussing the progress of ongoing research projects. During this meeting, researchers present their research to the Scientific Research Committee, the Director, a member of the Board, Head of the project department, research groups and to other stakeholders who are interested. Research on leprosy, supported by NLR, focuses on the following seven themes¹⁻⁴:

- Reactions and nerve damage
- Prevention of disabilities
- Early diagnosis of disease and chemotherapy
- Incidence and transmission
- Community-based rehabilitation
- Stigma and discrimination
- Functioning and quality of health services

1.5 Problem statement

As described above, NLR is one of the major foundations in the world financially supporting scientific research on leprosy. However, the staff of NLR experiences problems with the communication of

² WWAV Marketing and Communications for the non-profit sector (2010). Database analyse Leprastichting 'Geef lepra het laatste zetje'. Woerden.

³ Turing Foundation, & Leprastichting (2008). TF - NLR Samenwerkingsovereenkomst.

⁴ Leprastichting (2010). Bestuursverslag en jaarrekening Leprastichting.

⁵ Commissie Wetenschappelijk Onderzoek Leprastichting (2010). Intern reglement.

scientific research findings to their donors. The scientific research is often of high technical level and hard to understand for lay people. This is one of the reasons why NLR does not communicate the findings of scientific research to their donors more often; they find it difficult to translate scientific research into clear, appealing messages. This problem, as experienced by the staff of NLR, was the main reason for starting this study. By conducting this study, NLR would like to find out how they can communicate scientific research findings in messages that are understandable and appealing for their donors. Besides this, they would like to know how scientific research findings can be communicated to the donors in order to inform them and increase support for scientific research on leprosy.

The problem, as experienced by the staff of NLR, is formulated using the information transmission approach on communication. NLR aims to transmit information on scientific research to their donors to inform them, and increase support for scientific research on leprosy. However, more recently the perspective on science communication has moved away from transmission thinking to transactional thinking. In the past it was believed information transmission would result in more knowledgeable citizens and eventually lead to an increase in support for science and technological innovations. However, it seemed that providing people with scientific information was not sufficient for increasing acceptance and support for scientific innovations in society. While information transmission perceives the communication from sender to receiver as an isolated process, in reality communication is highly contextual (Knoop, 2004). Therefore, communication is no longer perceived as a linear process, but as an interactive process taking place in the context of relationships, whereby dialogue is initiated to exchange knowledge, create a shared understanding and learn from each other's interests and values (Auweraert, 2007; Duncan & Moriarty, 1998; Hanssen & Katwijk, 2007).. According to Carrada (2006): 'the quality of communication mainly depends on the quality of relationships'. Transactional thinking therefore, focuses more on the importance of relationship building in order to ensure effective interaction and dialogue between sender and receiver (Carrada, 2006)(p.3). According to Logan (2001) transactional thinking does not replace information transmission; they are considered as two approaches on one continuum. Information transmission is situated on the one end and focuses on public understanding and awareness, while transactional thinking is situated on the other end of the continuum and focuses on public engagement and participation in communication. Although the two approaches are not mutually exclusive, Logan (2001) argues transactional thinking provides a more comprehensive explanation of the communication process, in the context of relationships (Logan, 2001). Based on the literature described above, one-way transmission of scientific information from NLR to donors will probably not result in an increase in support for science among donors. Therefore, I decided to study science communication from a transactional approach, with the emphasis on relationship building between NLR and their donors, taking into account the importance of engagement and participation in science communication.

1.6. Main research question and objective

The main research question of this study is formulated as follows: *'How can the Netherlands Leprosy Relief improve relations with their donors through communicating scientific research findings on leprosy?'*.

The main objective of this study is to find out how science communication can improve relationships between donors and NLR. This study is relevant to NLR and their donors, because once relationships

are improved, NLR and the donors can both receive long term benefits from this relationship. An improved relationship could benefit NLR with an increase in preservation of long-term donors, and might lead to more dialogue between donors and NLR. This will result in the opportunity for NLR to learn from the donors knowledge and experience. Furthermore, the donors will be able to become more involved by sharing their own knowledge or experience with NLR which might increase their feeling of being valued. Besides, this study will contribute to the goal as stated in the policy plan of NLR, "More attention must be given to the recruitment of new donors and the preservation and loyalty of existing donors"⁶. It is expected that, when NLR would be able to communicate the purpose and outcomes of scientific research to donors, transparency and accountability of NLR would also increase. The outcome of this study will be a report with recommendations for NLR, concerning how they can use science communication to improve relationships with their donors.

Although a lot of literature is present on communication of science to society, little is known on the role of science communication in relationships among donors and non-profit organizations. The outcome of this study is considered to be of scientific relevance, because it will contribute new insights to existing literature on the role of science communication in relationship management between charity organizations and their donors.

1.7. Structure of the thesis

The structure of the thesis is as follows. Chapter two describes the conceptual and theoretical framework and the research questions. Chapter three describes the methodology, which techniques have been used and how data analyses has been done. Chapter four describes the results, followed by a conclusion and discussion in chapter five.

⁶ Bestuur Leprastichting (2007). Beleidsplan Leprastichting 2007-2012.

2. Theoretical and conceptual framework

To answer the research question, literature has been sought to gain more insight in theories and concepts surrounding 'relationships in the non profit sector' and 'science communication'. Based on the literature search the conceptual and theoretical framework was developed, which served as a guide to develop interview protocols and analyze the data. In this chapter relationship marketing in the non profit sector be studied, followed by a description of the identity salience model. Thereafter, science communication will be explained in the light of this model. Based on the identity salience model and the literature, research questions were developed and described at the end of this chapter.

2.1. Relationship marketing

Relationships between non-profit organizations and donors are vital in order to maintain longevity of the non profit sector. The relationship starts when an individual decides to make a small donation to an organization. After an individual has made a donation, the organization will invest time and money to demonstrate the organization's effectiveness in order to grow the relationship. Investment in relationships is important because it can turn one-time donors into annual donors, who can make significant donations for a longer period of time (Waters, 2011). Worth (2002) emphasizes organizations should dedicate more time and resources to their relation with donors, because it increases donor's loyalty to the organization (Worth, 2002). Although relationships are considered to be very important in the non profit sector, they mainly receive attention in the profit sector. A lot of research has been done on how service providers should invest in relationships with consumers, so consumers will keep buying their product, and service providers can make profit. A common form of marketing which is used in the profit sector is 'relationship marketing' (Berry, 1983). Relationship marketing is a form of marketing which is not focused on sales transactions alone, but emphasizes satisfaction and maintenance of long term relationships with consumers. In relationship marketing, consumers are viewed as partners, whereby value is created in the process of dealing and interacting with each other. The resulting partnership can be used to increase the ability of the organization to compete with other organizations (Berry, 1983; Sheth & Parvatiyar, 1995; Weir & Hibbert, 2006). While relations in the profit sector are primarily based on economic benefits for both the service provider and consumer, relationships in the non profit sector are based on an exchange of values. Instead of paying money for a product, individuals donate money, products or services to an organization and receive psychological and emotional rewards in return (Arnett et al., 2003; Bekkers & Wiepking, 2010).

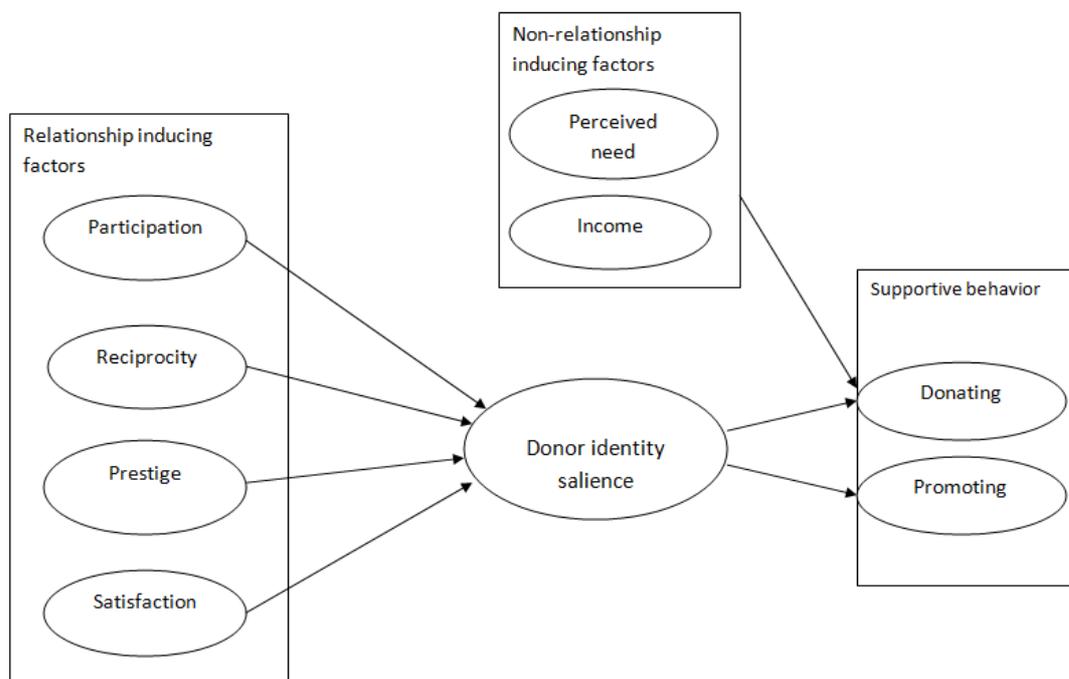
2.1.1. Identity salience model of non profit relationship marketing success

Marketing scientist Arnett conducted several studies on relationships in the context of higher education. He argues that relationship marketing, as introduced by Berry (1983), is also a strategy which can be used in the non profit sector to maintain long term relationships with donors. He carried out a study on the role of identity salience in relationship marketing in the non profit higher education sector. Arnett (2003) states that especially in relationships in the non profit sector, where donors receive psychological or emotional benefits in return, salient identities play an important role (Arnett et al., 2003). Salient identities are defined by Hoelter (1983) as *'the relative importance or centrality of a given identity for defining oneself'* (Hoelter, 1983)(p.141). In addition, Lee (1999) states that people who have a strong salient identity for being a donor will also put more effort in

performing behaviour that is congruent to this identity (Lee, Piliavin & Call, 1999). Arnett (2003) developed a model which emphasizes the importance of donor identity salience in explaining success of a non-profit organization, also called 'the identity salience model of non profit relationship marketing success', as shown in Figure 2. In this model donor identity salience is an important concept. The model states that donor identity is reinforced by the following relationship inducing factors, participation, reciprocity, prestige and satisfaction. When donor identities are reinforced and become more salient, supportive behaviour is likely to increase. Supportive behaviour consists of donating money and promoting behaviour, which means spreading positive word about the organization to others (Arnett et al., 2003). According to Arnett (2003) relationship marketing is successful when an organization is able to increase donating and promoting behaviour among their own donors. In addition, Mael and Ashforth (1992) also consider relationship marketing in the non profit sector successful when organizations are able to generate promoting behaviour among their donors and increase donations (Mael & Ashforth, 1992).

The model implies that success results from the following relationship inducing factors: participation, reciprocity, prestige and satisfaction. These factors do not increase supportive behaviours directly, but they influence these behaviours through reinforcing the salient donor identity. Besides this, there are non-relationship inducing factors, like income and perceived need, which tend to have a direct impact on the behaviour of donating money and promoting (Arnett et al., 2003). Arnett tested the model in a quantitative study, in the context of non profit higher education marketing, among alumni who donate money to their university. The results showed that donor identity salience plays a mediating role between participation, prestige and supportive behaviours. The results did not provide support for the role of satisfaction and reciprocity as antecedents of donor identity salience. Although no effect was found for satisfaction and reciprocity, Arnett (2003) argues these concepts might play an important role in the context of other non-profit organizations (Arnett et al., 2003). Therefore, the concepts of satisfaction and reciprocity are taken into account in this study. In the following paragraph, an explanation of relationship inducing and non-relationship inducing factors will be given, and the possible role of science communication therein will be discussed.

Figure 2: The identity salience model of nonprofit relationship marketing success (Arnett, German & Hunt, 2003)



2.2. Science communication and the identity salience model

I have chosen to use the 'identity salience model of non profit relationship marketing success', developed by Arnett (2003), to study the role of science communication in the relationship between NLR and donors in a qualitative study. This model emphasises the importance of relationship and non relationship inducing factors which increase donating and promoting behaviour among donors, through the concept of donor identity. I have chosen to use this model because it provides insight in which factors influence the relationship between donors and non-profit organizations. I decided to study how these factors play a role in science communication and how they can contribute to an improved relationship between donors and NLR. In this paragraph the possible role of science communication in the 'identity salience model of relationship marketing success' will be discussed.

2.2.1. Relationship inducing factors

In the model of Arnett (2003) (see Figure 2) participation, reciprocity, prestige and satisfaction are considered as relationship inducing factors which indirectly increase supportive behaviours, like promoting and donating, through the concept of donor identity salience. In this paragraph these factors, and the possible role of science communication therein, will be discussed.

Participation

Literature states that people are more likely to participate in activities consistent with their salient identity. When people engage in activities of an organization they financially support, their salient identity of being a supporter or donor of that organization, will be confirmed (Bhattacharya, Rao & Glynn, 1995; Smith & Mackie, 2000; Stryker & Burke, 2000). Stryker and Burke (2000) state that if alumni participate in activities organised by the university, identification with the university is increased (Stryker & Burke, 2000). In addition, Arnett (2003) recommends organizations to organize activities where donors can get involved and talk to the employees of the organization in order to reinforce donor identity. These activities also provide potential donors the opportunity to create social ties with the organization's identity, and will eventually increase donating and promoting behaviour (Arnett et al., 2003).

Participation is not only considered as donors engaging in activities, but it is a process which requires effort from both sides. The process is characterized by the input both parties bring to the process. (Rowe & Frewer, 2000). Burns (2003) argues that using participation methods in science communication is useful. According to her, all researchers should be challenged to go into dialogue with the public and interact with them in order to learn from each other's knowledge. Organizing meetings around the topic of scientific research on leprosy can create opportunities for researchers and donors to go into dialogue and exchange opinions and ideas (Burns, O'Conner & Stocklmayer, 2003; Carrada, 2006). Therefore, it is believed participation could play a role in science communication, by creating moments of interaction between researchers, donors and employees of NLR to increase the exchange of knowledge between these groups and establish a learning process. It is therefore hypothesised participation in science communication might improve relationships.

Reciprocity

Reciprocity implies an organization not only receives, but also gives something in return to donors, for instance, information, gratitude or recognition. Farmer (1999) found if the organization expressed they valued and cared about volunteers, withdrawal intentions were lower (Farmer & Fedor, 1999). In addition, Shabbir (2007) carried out a qualitative study to understand the nature and role of

donor-perceived relationship quality. The results showed donors perceived the relation with an organization as good when they received emotional rewards in return, like thanks or gratitude, which led to positive feelings and confirmation of their self-esteem (Shabbir, Palihawadana & Thwaites, 2007).

Reciprocity also implies an organization should provide feedback to donors to inform them how their money is used, for what cause, and how it has benefited the beneficiaries (Sargeant, 2001; Shabbir et al., 2007). Therefore, it was hypothesized that science communication is also a form of reciprocity. If NLR perceives science communication as a form of reciprocity, for instance through informing the donors what research projects are supported with their contribution, relationships between donors and NLR might improve.

Prestige

Prestige of an organization is often perceived as an indicator of success. The study of Bhattacharya (1995) and Mael and Ashforth (1992) showed organizational success or prestige is positively related to identification with the organization (Bhattacharya et al., 1995; Mael & Ashforth, 1992). In addition, Cialdini (1976) states people tend to associate themselves with successful organizations or groups, in order to Bask In Reflected Glory, also called BIRGing. BIRGing is the feeling people have when they can share in the success of an organization or a person, to whom they are in some way related. This feeling is then expressed by telling others they are related to this successful organization or person. According to Cialdini (1976) people are more likely to bask in reflected glory when they contributed to the success themselves (Cialdini, Borden, Thorne, Walker, Freeman & Sloan, 1976). Based on these findings, it is likely donors will associate themselves with achieved success of the organization to which they donate money.

Considering the role of science communication, it is assumed that developments in research on leprosy could be used as an indicator of success of the organization. Van Woerkum (2007) gives an example of how people use information on scientific research for different purposes. People can present themselves as informed, rational and intelligent when they bring scientific arguments to the discourse. They can use scientific information as a source of knowledge, which contributes to their identity and increases their credibility (Van Woerkum & Te Molder, 2007). Furthermore, it is likely people want to identify themselves with successes achieved in scientific research.

Hence, prestige also depends on whether an organization, as well as the research they support, is perceived trustworthy (Shabbir et al., 2007). Trust is considered to be a belief, feeling or expectation about the other's trustworthiness. Moorman (1992) defines trust as '*a willingness to rely on an exchange partner in whom one has confidence*' (Moorman, Zaltman & Deshpande, 1992)(p.315). Trust is especially important in relationships between non-profit organizations and donors, where services provided to the beneficiary are often intangible and hard to assess by the donors (Sargeant, 2002). Donors trust in organizational successes is considered relevant in the context of this study, because outcomes of scientific research on leprosy are often complex and hard to understand. Because of this, it is likely that identification of donors with organizational successes depends on donors' perception of the trustworthiness of NLR and research. When donors have confidence and can identify themselves with NLR, donor identity is reinforced and donating and promoting behaviour might increase.

Satisfaction

Satisfaction is an important predictor of donor loyalty and is thought to indirectly influence donating and promoting behaviour, through donor identity. Satisfaction is defined as whether a person is satisfied with how the organization performs and communicates to the donors. Satisfaction results from the comparison people make between what they expect to receive from an organization and what they actually receive (Arnett et al., 2003; Gustafsson, Johnson & Roos, 2005; Shabbir et al., 2007). Bhattacharya states that if people had positive experiences with how an organization performs they are more satisfied, and identification with the organization increases (Bhattacharya et al., 1995). Besides, when people are more satisfied, they are more likely to maintain commitment to the relationship (Waters, 2011).

The potential role of science communication in the concept of satisfaction and the influence on donating and promoting behaviour is still unclear. However, it seems satisfaction is connected to reciprocity, as described above, since people feel satisfied when they receive something in return from the organization. In the non profit sector, this is often gratitude or information on how their contribution has helped the beneficiary (Sargeant & Lee, 2002). It is hypothesized that communication to the donors on how their contribution helped to achieve successes with research, might increase satisfaction of donors with NLR. Donors are then able to see how scientific research contributes to the goal of NLR to eliminate leprosy, which could positively influence their perception of NLR. Therefore, when NLR would communicate to donors how their contribution helped to achieve successes with scientific research to their donors, this might result in more satisfaction with NLR and enhance the relationship.

Perceived need

In the original 'identity salience model of non profit relationship marketing success', perceived need and income are included as non-relationship inducing factors, which tend to have a direct influence on donating behaviour. In this study, income is not taken into account, because no data is available on the annual salary of donors. Therefore it is not possible to study the effect of income on donating behaviour. In the model of Arnett (2003) perceived need is defined as the organizational need for revenues for a certain cause. Perceived need is included in this study and will be explained in this paragraph.

Smith (2000) reviewed the literature and describes several factors which influence the intention to donate money to non-profit organizations. He found money is only given if people perceive that someone or an organization needs or deserves help. People are more likely to help if they see other people suffering from poverty, pain or hunger, either in real life or through media. These findings are confirmed by Bekkers (2010) who reviewed the literature to look for mechanisms that drive charitable giving. Literature showed organizations first of all need to raise awareness that help is needed, in order to motivate people to donate money. Furthermore, the communication of needs is likely to have a direct impact on donating behaviour (Bekkers & Wiepking, 2010; Smith & Mackie, 2000).

In this study perceived need is placed in the perspective of scientific research. It is hypothesised scientific research can be communicated as a need to the donors. For instance, if NLR is short on money to finance an important research project, they could communicate this as a 'need' to their donors, which might increase donating behaviour.

2.3. Summary

This chapter explored the 'identity salience model of non profit relationship marketing success' developed by Arnett (2003). The model assumes that relationship inducing factors, like participation, reciprocity, satisfaction and prestige indirectly increase donating and promoting behavior through the concept of donor identity. Perceived need was included as non relationship inducing factor, which directly influences donating and promoting behavior. This model was used to gain more insight in donor identity, through studying what the motivations of people are to donate money to NLR. Furthermore, the role of science communication in relationship inducing and non relationship inducing factor was explored.

2.4. Research questions

Based on the 'identity salience model of non profit relationship marketing success' (see Figure 2) and the literature, the following research questions were developed to answer the main research question, which is: *'How can NLR improve relations with donors through communicating scientific research findings on leprosy?'*.

- I. How do researchers perceive the role of science communication in the relationship between the Netherlands Leprosy Relief and their donors?
- II. What motivates donors to give and what does this say about their donor identity?
- III. Can participatory science communication improve the relationship between Netherlands Leprosy Relief and their donors, and if so, how?
- IV. What is the role of 'reciprocity' in improving the relationship between Netherlands Leprosy Relief and their donors, and (how) can science communication contribute in that respect?
- V. What is the role of organizational prestige in improving the relationship between Netherlands Leprosy Relief and their donors, and (how) can science communication contribute in that respect?
- VI. What is the role of 'satisfaction' in improving the relationship between Netherlands Leprosy Relief and its donors, and what, if any, is the role of science communication therein?
- VII. What is the relation between donors' perceived need of scientific research and their relationship with Netherlands Leprosy Relief, and (how) can science communication play a role in this?

3. Methodology

I have chosen an explorative design in this study. Qualitative methods were used as main method because they provide information rich and detailed data. However, to reach the broad group of diverse donors I have chosen to complement the qualitative methods with quantitative methods. By using quantitative methods a broad population could be reached in a shorter time frame. In addition, both methods could complement each other and maximize the quality of data (Silverman, 2005). In this chapter the sampling method and study population will be described, followed by an explanation of the methods used for data collection. Lastly, aspects such as data processing and analysis will be explained.

3.1. Sampling and study population

The study population for the semi-structured interviews consisted of researchers and notarial donors. The study population for the online survey comprised of individual donors who received the email newsletter of NLR. To retrieve the study population for the semi-structured interviews, I used the so-called judgment or purposive sampling strategy. Purposive sampling refers to strategies in which the researcher selects people on purpose in order to get a sample that is most likely to provide an answer on the research question (Marshall, 1996; Silverman, 2005). I used purposive sampling to select the researchers and notarial donors. In this paragraph an explanation is given on why I have chosen to include these three groups in this study.

3.1.1. Notarial donors

For the qualitative interviews I decided to include notarial donors and major donors which are capital funds and charity foundations, such as the Turing Foundation. I decided to include only donors who donate more than 300 euro per year through notarial deed, and who have a contract until after 2011. I have chosen these selection criteria because I assumed that notarial donors, who give a higher amount of money for a minimum period of five years, feel more involved in the work of NLR, and are more willing to participate in an interview. I decided to exclude people whose contract ends in 2011, or else they will be approached too often in a short period of time. I decided to include donors who donate through notarial deed, because they are in terms of age and sex a representative sample of the total donor population of NLR. Besides this, NLR was interested in gaining more insight in the perspectives of their current group of donors on scientific research.

A letter was sent to 151 notarial donors who met the selection criteria, with the question if they were willing to participate in an interview. Out of the 151 donors, 32 responded on the letter, which is a response rate of 21.2%. Out of the 32 donors, 12 donors notified they were not able to participate in an interview for a variety of reasons, the other 21 donors participated in an interview. Of the 21 donors, 13 were male and 6 female. Two interviews were conducted where both the husband and wife participated. All respondents have been donating money to NLR for ten years or longer. Of 2058 people in the donor file of NLR birth dates are known. The mean age among these donors is 67.4, which corresponded to the mean age of notarial donors who participated in the interviews, which was 68.1. The youngest donor participating in the interview was 55 and the oldest was 86. One interview was not recorded correctly, therefore data from this interview were not taken into account in the results. Four major donors were contacted through letter; two of them, including a capital fund and the Turing Foundation responded and participated in an interview. The interviews were conducted at the respondents' home.

3.1.2. Researchers

Researchers in the field of leprosy were included to study their perspectives on the role of science communication in the relationship between NLR and donors. Besides this, by including the researchers similarities and differences between the perspectives of donors and researchers on the role of science communication could be explored. In total, eleven researchers, who conducted research on leprosy supported by NLR, were asked by email, whether they were willing to cooperate in an interview on the communication of scientific research findings to the donors of NLR. Nine researchers, four men and five women, responded and participated in an interview. The researchers worked at the institutes described below. Within these research institutes, different fields of expertise in both basic and applied research are represented.

- Leiden Universitair Medisch Centrum
- Amsterdam Medisch Centrum
- Nederlands Kanker Instituut
- Erasmus Medisch Centrum
- Tropeninstituut Amsterdam

3.1.3. Individual donors

The respondents who participated in the online survey were individual donors who received the email newsletter of NLR. These donors were included in this study in order to reach a more diverse group of donors, beyond the inclusion of notarial donors. By including a broader group of individual donors more information could be retrieved and the possibility to make generalizations increased.

The email newsletter was sent to 6036 email addresses. In total, 75 people filled in the online survey, 44 (59%) female and 31 (41%) male. Of 27,444 people in the donor file of NLR, gender is known. In this file 55% is female and 45% is male. This gender distribution corresponded to the gender distribution of donors who filled in the online survey. Of all respondents who filled in the survey, 84% was aged 50 or older, which is similar to the percentage of donors aged above 50 in the total donor file of NLR, which is 85%. These findings show gender and age of donors who filled in the online survey represented the gender and age of the total donor file of NLR.

3.2. Methods

This section explains the methods used for data collection. First the semi-structured interview will be described followed by the online survey.

3.2.1. Semi-structured interview

Semi-structured interviews were conducted among the notarial donors and researchers. I decided to use semi-structured interviews, because they provide the researcher with a lot of freedom, whereby she is able to maximize in-depth conversations. For the notarial donors questions were developed regarding the following topics 'donating money', 'Netherlands Leprosy Relief', 'scientific research on leprosy', and 'communication of scientific research' and described in the interview guideline (see annex 1). For the researchers, an interview guideline was made, consisting of questions regarding the following topics, 'Netherlands Leprosy Relief', 'donors', 'scientific research on leprosy' and 'communication of scientific research' (see annex 2).

3.2.2. Online survey

In addition to the semi-structured interviews, an online survey was distributed among individual donors who received the email newsletter of NLR. The survey was developed after 11 interviews were conducted. The response categories were based on the data from the conducted interviews. The survey consisted of 14 questions around the topic of donating money to NLR and the importance of scientific research on leprosy (see annex 3). The aim of this survey was to gain insight in how many people were interested in receiving information on scientific research, and through which channels they would like to receive this information. Besides this, the survey was used to gain more insight in why people donate money to NLR. Also the amount of involvement with NLR was measured by the number of people who responded to the online survey. The advantage of using an online survey was that a broad range of donors could be reached. In addition, the threshold to participate in an online survey is lower than participating in an interview, because it costs less time (Evans & Mathur, 2005). By using both semi-structured interviews and an online survey internal validity of the study increased (Baxter & Babbie, 2004; Hardon, Boonmongkon P & Streeflan P., 2001).

3.3. Data analyses

After receiving consent from the interviewee, the interviews were recorded for reasons of accuracy. I transcribed the interviews on the same day, or the day after the interview was conducted, in order to increase precision. During transcription anonymity of the respondents was secured. The interviews were conducted in Dutch, the quotes described in Chapter 4, were translated to English, by the researcher.

3.3.1. Analyses of qualitative data

The interviews were analyzed separately for the group of 'researchers' and the group of 'notarial donors'. During analyses I kept the concepts of the 'identity salience model of non profit relationship marketing success' in mind. The transcripts were analysed by marking possible codes, which were relevant for answering the research questions, in the margins of the transcripts (e.g. involvement, donor identity, feeling valued, satisfaction). The codes were either derived from the theoretical framework, or developed during analyses. In order to answer the research questions, the most relevant codes were selected. The selected codes were studied to look for possible patterns or connections to other codes. For instance the codes; 'participating in meetings' and 'feeling valued', seemed connected because they appeared together in one quote, among three transcripts. Therefore, I labelled these codes as a pattern (Boeije, 2005; Silverman, 2005). The meaning of this pattern was interpreted as, 'when a donor participates in a meeting or activity his feeling of being valued by the organization increases'. The codes and patterns which appeared from the transcripts were compared between the group of 'notarial donors' and the group of 'researchers'. Differences and similarities in patterns and codes between the groups were identified and interpreted. The most remarkable differences and similarities, which contributed to answering the research questions, are described in Chapter 4.

3.3.2. Analyses of quantitative data

The quantitative data from the online survey were analyzed with Excel. The data was compared to the qualitative data from the group of 'notarial donors', to search for similarities and differences. The most remarkable similarities and differences, which contributed to answering the research questions, are described in the next chapter.

4. Results

This chapter describes the results of this study, which have been derived from the interviews with the notarial donors and the researchers, and from the online survey among the individual donors. The results will be described following the research questions in paragraph 2.4. The first paragraph will describe the perspective of researchers on the role of science communication. The next paragraph will provide more insight in donor identity, by analysing the motivations of donors to give. In Paragraph 4.3. I will discuss the use of participatory methods to communicate about science, followed by an explanation of science communication as a form of reciprocity in paragraph 4.4. The relation between science communication and organizational prestige will be presented in paragraph 4.5. Next, paragraph 4.6. will describe the role of satisfaction in science communication, followed by the communication of science as a need in paragraph 4.7. The chapter ends with a brief summary of the results presented in paragraph 4.8. Per paragraph I have mentioned which data, either from the notarial donors or individual donors, are included in the results. In this chapter quotes from the respondents are frequently used. Quotes from the notarial donors and foundations are labelled with a 'D' and quotes from the researchers are labelled with a 'R'. Some sections of text were omitted from the quotes when they were not relevant to include in the results, this is indicated with (...).

4.1. Perspective of researchers on the role of science communication

The interviews with the researchers were conducted to gain more insight in how they perceived the role of science communication in the relationship between NLR and the donors. In this paragraph the researchers' perception on the donor population will be described. Thereafter, the opinion of researchers of why it is important to communicate about scientific research, and how it should be communicated will be presented.

4.1.1. Researchers' perceptions of the donor population of NLR

During the qualitative interviews the researchers were asked if they could describe some characteristics of donors of NLR. Two researchers believed the majority of the donors will have a Christian background, because leprosy is often known from the Bible.

R3: I think they are people who have affinity with religious culture. Because, from a Biblical perspective, leprosy has always been on the map.

Although the majority of donors in the file of NLR is religious, religion was not mentioned very often during the interviews with the notarial donors. Three notarial donors mentioned faith as an additional motivation to donate money to NLR and 10.7% of the individual donors indicated religious beliefs as a motivation to donate to NLR (see Figure 3). The researchers' belief that the majority of donors will have a Christian background is correct, because the majority of the donors have a religious background. However, religion was not mentioned as main motivation to donate to NLR.

Furthermore, seven researchers stated the majority of the donor population will be aged, because leprosy is a disease of the past. This is indeed the case, as described in Chapter 3, 85% of the donors is aged above 50. Lastly, three researchers mentioned donors of NLR are probably committed people and passionate to help others, as shown in the following quote.

R4: *On the average, I believe they are passionate people who want to help others and are committed to the poor. Because it are often poor people who have leprosy, so I think they are very emphatic persons, as I see it for myself.*

The perception of donors as being committed and passionate people corresponded with how notarial and individual donors described themselves, as will be shown in paragraph 4.2.

4.1.2. Donors need to know why scientific research on leprosy is necessary

The researchers were asked to explain why they consider scientific research on leprosy as important. The majority of the researchers mentioned scientific research on leprosy is necessary because there is still so much unknown in the field of leprosy.

R3: *There is still so much unknown around leprosy, which is actually weird because it is a very old disease. However, everyone thinks it is already solved. So, there are still some very important, fundamental things, which are not known. You can question whether it is important to know these things, but it is quite important if you start thinking about strategies. Than it makes a big difference.*

All researchers agreed the communication of scientific research to donors is important. One of the reasons was, they wanted the donors to know and understand that scientific research is necessary to book progress in leprosy control and eradication.

R1: *It is important that this kind of research is conducted if we want to make progress in leprosy control. So, I also believe the donors should know why scientific research is important, what the content is of research projects, and where they are executed.*

Two other researchers explained communication of scientific findings is important because it shows to the donors NLR wants to improve, book progress, and aims to achieve their vision of a world without leprosy. Besides, four researchers believed NLR has the obligation to communicate to the donors the content of research projects, because the money of donors is used to support these research projects.

I: *What do you think about the fact that the Netherlands Leprosy Relief wants to put more effort in communicating the content of scientific research to their donors?*

R8: *I am absolutely in favor of that. If people give their money to it, I think they also have a right to know where the money is invested in, right? So I would always be very clear in communicating about it, where does the money go to, and what is the aim of these research projects, absolutely.*

4.1.3. Use internet and seek publicity to communicate about scientific research

During the interviews the researchers were asked what channels they would use to communicate about their own research. All researchers agreed internet, and especially the website are effective channels to communicate about science. Five researchers suggested the use of movies to communicate about science. The opinions among researchers, regarding the possibility to organize meetings for donors on the topic of scientific research, differed. Three researchers thought that organizing meetings for donors would not be very effective, according to them donors were not

interested in attending a meeting. However, three other researchers indicated meetings around the topic of scientific research provided them an opportunity to talk about their work with donors.

I: How would you feel about going into dialogue with donors of NLR about your research?

R5: I do think the leprosy foundation, or lay persons should first of all test whether the information is understandable. But it provides an opportunity to transfer and explain in a relative short session some things about research to the donors. Currently, I have no idea, imagine there would be a donor next to me, I have no idea what kind of questions or ideas he has. So, when you go into dialogue, he gets the feeling like, oh yes, that is how they do it.

R9: An old method is, that you create discussion groups, to hear how people actually think about a topic. It can be used as a way to gain more insight in how donors feel and think about certain topics. Well, maybe you can involve people by explaining very briefly what the research is about. For instance, you explain what was found in the past and how the current research is continuing. And then you can ask, do you think it is worthwhile to support this research.

It was interesting to note these researchers were very passionate about their work and interested to go into dialogue with donors. They stated that meetings would be useful in order to explain to the donors the content of the research projects. Besides, researcher 9 mentions meetings can also provide an opportunity to receive input from the donors, by asking them to explain how they think about certain research projects.

Three other researchers mentioned the media as an effective channel to communicate about science. They believed NLR should profile itself more as an organization which supports scientific research on leprosy, because research on leprosy in the Netherlands is of high quality.

I: Do you believe it is important the Netherlands Leprosy Relief wants to communicate the content of research projects to their donors?

R5: Well, I think it is fair towards the donors. And I think you should profile yourself as a non-profit organization, by saying we also support scientific research. Other organizations are also doing this, for instance, the diabetic foundation and the cancer foundation, they are always engaged in research.

R3: I think the Netherlands Leprosy Relief has to show the full scope of what they are doing, which is actually very much. (..) You just need to offer the whole range, and you should be proud of the scientific research on leprosy in the Netherlands, which is of high quality. Not because we are doing it ourselves, haha. But worldwide, it is very good, thanks to NLR, and they should feel assured to sell it some more.

R9: I think you should try to seek publicity, like the newspapers. You should try to profile yourself as Netherlands Leprosy Relief on this kind of work. Because it will increase your visibility, but also your credibility. And especially when a fair share of the donors believes scientific research is important. These donors would also like to have the possibility to say to their families, did you see that in the newspaper, I donate to this organization.

It is interesting to see all three researchers believe NLR should seek more publicity with information on scientific research on leprosy and profile itself more as an organization which supports scientific research. According to researcher 9 publicity of scientific research in the media, increases visibility and credibility of NLR, and offers the donors an opportunity to talk about their donation with other people. Researcher 5 compares NLR to other organizations who also profile themselves with the research they support. Therefore, she believes NLR should also publicly express they support scientific research on leprosy.

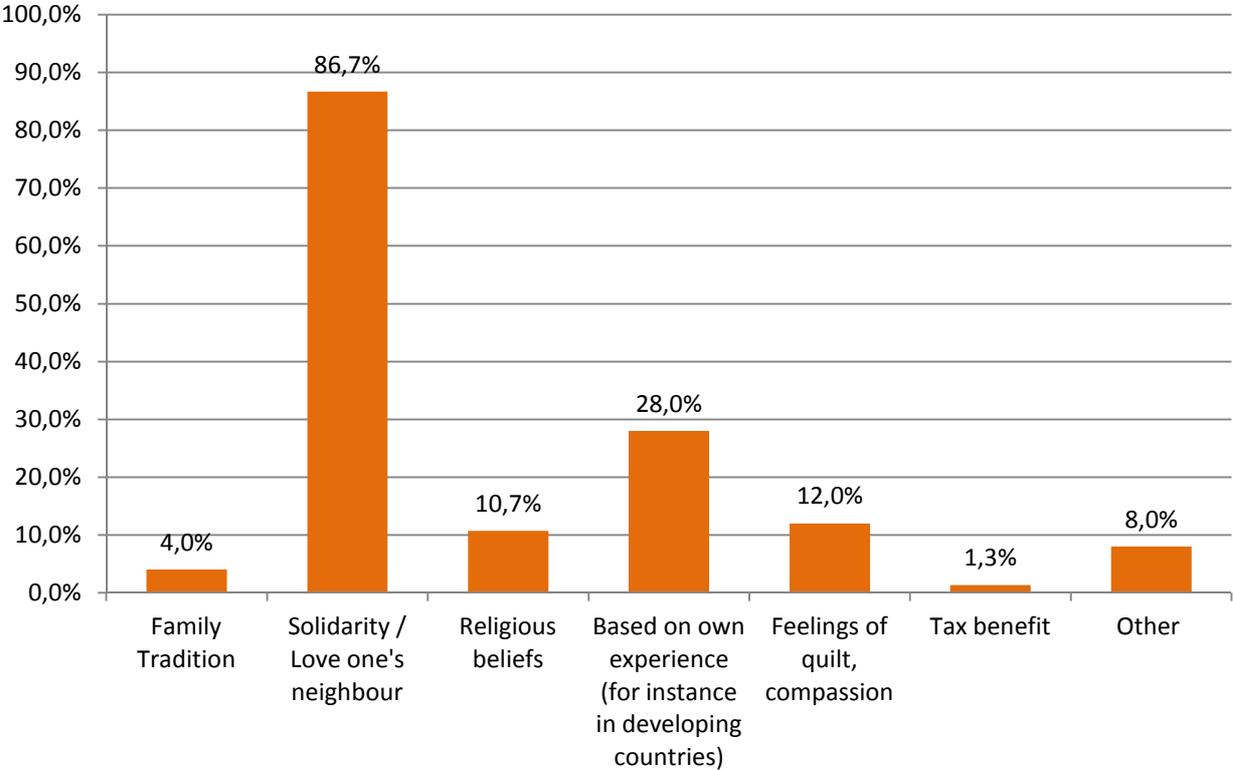
4.2. Donor identity

Weir (2006) argues organizations should gain more insight in why people donate money and how they frame their identity of being a donor. This information can be used to develop communication strategies which contribute to the development of long term relationships with donors (Weir & Hibbert, 2006). To gain more insight in donor identity, notarial and individual donors were asked to describe their motivation to donate money in general, and why they have chosen to donate to NLR. The findings will be described in this paragraph.

4.2.1. Solidarity as motivation to donate money to non-profit organizations

To gain more insight in donor identity, notarial and individual donors were asked what their motivation was to donate money to non-profit organizations. As shown in Figure 3, the majority of the individual donors (86.7%) donate money out of feelings of solidarity and love of one’s neighbor.

Figure 3: Motivations of individual donors to donate money to non-profit organizations (N=75)
 (* Multiple answers allowed)



During the qualitative interviews notarial donors were asked to explain why they donate money to non-profit organizations. The answers were similar to those of individual donors, notarial donors also donate money out of feelings of solidarity. Furthermore, sentences like, *'I donate money out of*

compassion and feelings of guilt' or 'I want to contribute to a better world' also occurred frequently in the transcripts.

I: Can you explain why you donate money to non-profit organizations?

D16: Well, I think, we cannot escape to see how incredibly fortunate we are here, compared to most of humanity. So a bit of sharing is not a problem. (Woman, 61)

I: Can you explain why you donate money to non-profit organizations?

D15: Yes, well, I always say it is a feeling of guilt. We are living in extremely good conditions, while 90% of the world is much worse. (...) The Shell man, a Dutch company, made a huge mess in Nigeria, which is actually quite shameful. And yes, you feel a little responsible and a bit guilty for it. Besides, I live very simple, so I do not need the money (..) It is also the feeling, that you are somehow, indirectly able to contribute to a better world. (Man)

It is interesting to see both notarial donors use plural forms, when they state how fortunate we are as Dutch population. This opinion was mentioned by 10 (48%) other respondents, who donate money because we, as Dutch population, are living in a luxury position compared to people in developing countries. These quotes indicate respondents compare their own life to people who live in developing countries, based on the differences between their own position and the position of the other person, they feel 'obligated' or 'motivated' to donate money to non-profit organizations.

4.2.2. Notarial donors distinguish themselves from donors of other organizations

During the qualitative interviews with the notarial donors, several donors started to make comparisons between NLR and other non-profit organizations when they talked about the topic of donating to NLR. Often they specifically made comparisons between NLR and major medical nonprofit organizations in the Netherlands, for instance the cancer foundation or the heart foundation. The opinion that these major medical nonprofit organizations received substantial revenues was expressed by eight notarial donors.

D12: I believe that in general, these medical non-profit organizations, which are aimed at diseases we are susceptible too, like rheumatism, cancer, multiple sclerosis, asthma, heart foundation, kidney foundations, I think they all earn good money. (Man, 62)

D19: I have always been a little bit hesitant to walk behind topics where everyone is walking behind, right?

I: Can you explain what you mean?

D19: Yes, of course, like cancer, I have been a member of the 'Wilhelminafonds' for a while. If enough family members die of cancer, you feel called to become a member and donate money. But when you read their annual report, you see they actually receive a lot of money. Which does not mean they cannot use it, but I got the idea there is a struggle somehow. I do not understand where they use all this extra money for, it is kind of valid, but there are already enough people who donate to this organization, so I stopped donating. (Man, 62)

I: Can you describe the situation in which you decided to donate money to the Netherlands Leprosy Relief?

D21: Yes, I support many non-profit organizations. But a while ago, there was a news item which reported those major foundations, like the heart foundation, which was very often

in the news, a lot of money was going to, ehm..... Like, the heart foundation, has, or had, I do not know, but a cardiologist was head of the organization. That person was committed to the organization, for half a day or a day per month, and he went home with 180.000 euro. I found that outrageous, and therefore, I decided to quit donating to all those major foundations, and I started to look for smaller foundations, who work more locally. And the Netherlands Leprosy Relief has become one of them.(Woman, 55)

These quotes reveal notarial donors assume many people already donate to major medical non-profit organizations in the Netherlands. For them this is a reason not to donate to these organizations, but to choose for smaller nonprofit organizations, like NLR. They believe these smaller organizations have less revenue and will use the money more effectively. Three other notarial donors mentioned people have a tendency to give to diseases too which they are themselves susceptible, like cancer or heart diseases. Again the respondents distinguish themselves from these people, by choosing not to donate to organizations focused on cancer or heart diseases, but to donate to organizations focused on diseases further away, to which they are themselves less susceptible.

D13: So, I can imagine young people saying at a certain moment, okay, cancer, my mother in law has cancer, so I do the cancer foundation. My brother has asthma, so we go to the asthma foundation. That is actually very direct, while we have always been more focused on situations further away from our own bed. Just because other people, always want to do things that are close by. We do not feel that need, so we decided to support things further away. (Woman, 73)

It seems notarial donors want to distinguish themselves from others by choosing to support smaller organizations, focused on disease further away. They believe there are already enough people who donate to these organizations, therefore they chose to support other organizations. Besides, the data showed notarial donors also value their money is used effectively. Half of the notarial donors (N=11) pointed out that only a small amount of money is needed to help many people who suffer from leprosy. NLR emphasizes in their fundraising messages that small amounts of money are needed for instance to buy sandals or a leprosy test. The answers of the respondents showed that this message was indeed a trigger to donate to NLR.

D4: For only ten euro you can make a fitting pair of shoes for a person, you can do so much for it. (Woman, 64)

D8: Well in the communication from the Netherlands Leprosy Relief to their donors, it provides an image of, well for 25 euro you can cure someone from leprosy. And that appeals to me! Some lousy 25 euro's, well let's go ahead with it, let me give 25 euro's, eight times a year, than I helped at least eight people cure from leprosy, with help of the organization of course. For me this is an appealing message! (Man,71)

4.3. Participatory methods to improve the relationship between NLR and donors

In this paragraph findings will be presented on how participatory science communication plays a role in the relation between NLR and the donors. The results from the online survey and the qualitative data from the interviews with the notarial donors are taken into account.

4.3.1. Participation in discussions increases involvement

During the interviews notarial donors were asked whether they would be interested in going to a meeting organized by NLR. It was interesting to notice this question called on memories of people who have joined a meeting of a non-profit organization in the past. Three respondents elaborated on the meetings they went to and shared their experiences with the interviewer.

D16: During these meetings you get an overview of what they are doing and where (..) Besides, a forum was organized where you could participate in a discussion. I am not saying it helps, like now we have found the egg of Columbus, but yes, you surely create more involvement and commitment, and that is.. you gain more understanding of the dilemmas they are dealing with. Personally, I perceive it as very pleasant, that it is more than just giving money, but that you can also take a look behind the scenes and talk about is (..) Of, well gosh, hear, I am more than just the flow of money, so to speak, haha. (Women, 61)

This quote showed the respondent felt more involved with the organization after going to this meeting. Especially the opportunity to participate in discussions helped her to gain more understanding of the dilemmas the organization is dealing with. Besides, it is interesting this woman explained she enjoyed participating in discussions about the dilemmas the organization is facing, which made her feel like she could contribute more than only money.

Another respondent explained he often visits science cafes where discussion meetings are organized around scientific topics. Varied programs are offered during these meetings, and there is a possibility to go into dialogue or discussion with either researchers, experts or other people. He believes the format of these meetings can also be used to organize a meeting for donors. According to this donor it is important to offer a varied program during the meeting, including the possibility to go in discussion.

D19: I mean, for instance the meeting in the science cafe where I go to, I think these meetings are examples where people are interested in, and which you can organize (...) So, I imagine a kind of meeting with multimedia, where information on scientific research is transmitted in a loose, but pervasive manner. (Man, 62)

Of all the notarial donors who participated in the interview, ten (48%) would be interested in attending a meeting organized by NLR around the topic of scientific research. The other half of the respondents would not join a meeting, for a variety of reasons, such as distance, time or lack of interest. While half of the notarial donors were interested in going to a meeting, only 3 of the 75 individual donors who filled in the online survey indicated they would be interested in attending a meeting organized by NLR. It is interesting to notice there is a difference in willingness to participate in a meeting between notarial donors and individual donors, it seems notarial donors are more eager to join a meeting than individual donors.

4.3.2. Personal contact with people of NLR reinforces donating behaviour

The data from the qualitative interviews revealed notarial donors valued personal contact with people from NLR. One of the respondents went to a symposium organized by NLR last year, he went there because he wanted to see and meet people who worked for NLR. The need to have personal contact with people from an organization came up more often during the interviews. Three respondents explained there is nothing better than having personal contact with people of the

organization, because you have the opportunity to relate to these people and gain more insight in the work they are doing. The following two quotes illustrate that even participation in the interview stimulated the respondents to think about NLR and their own donating behaviour.

D 15: Actually, at the moment I am throwing out some clubs, do a little bit of slimming. But this visit will surely contribute to keeping this intact, I will keep this one in, absolutely.(Man)

D 21: Now you are sitting here, I have to think about the Netherlands Leprosy Relief, I am talking about it. I have never thought and talked about the Netherlands Leprosy relief so much as now. It is true. (Woman, 55)

These quotes indicate that having personal contact with the interviewer, increased commitment to NLR and increased the intention to continue donating.

4.3.3. Involvement in an organization stimulates promoting behaviour

As described above, participating in meetings and having personal contact with people of the organization is likely to increase involvement and commitment among donors. In the following quote a respondent recalled his experience of going to a meeting of 'Vluchtelingenwerk', where he also participated in a discussion. For this meeting, donors were invited to bring a friend. The respondent told his friend about the meeting and invited him, after the meeting his friend decided to become donor as well.

D12: I really enjoyed what they were doing. First, they presented all their staff and showed short movies about their work. Based on a short movie they presented a statement, where after we all received a small device with which we could vote, either to agree or disagree with the statement. (..) It was a very interesting afternoon. You were also allowed to bring an introduce, and so I did, and he also became a donor. (Man, 62)

This quote shows that organizing meetings influences promoting behaviour, because donors talk about these meetings with other people and invite them to come with them. Two other respondents joined a trip organized by NLR to Indonesia. Especially the opportunity to have personal contact with people who worked there made an impression on them. One of the respondents who joined the trip to Indonesia, also joined the director in a short television program. The quote shows how involvement with NLR increased promoting behavior.

I: Do you ever talk with other people about being a donor of NLR?

D 19: Nowadays, I talk more about it. For example, yesterday I was visiting my great-aunt. Those people watch television all day, she is aged over 90, so I told her, you should watch RTL4 tomorrow. Because I will be on television for three minutes, I they haven't cut me out. It joined an interview program it was mainly an interview with the director of the Netherlands Leprosy, Jan van Berkel, but I was asked to join at the end, so they could ask some questions to the donor (...). So I told that, and my aunt said, gosh, she grabbed her wallet and said can you deposit this on the account of the Netherlands Leprosy Relief, so I did. I do not want to persuade people, everybody makes his own choice. However sometimes you tell about it when people are interested and this has also led to more donations.

By participating in the television programme, the respondents' motivation to talk about the Netherlands Leprosy Relief to others increased. It was interesting to notice that all donors who went

to a meeting of a non-profit organization in the past were very eager to talk about it to the interviewer. These findings show participation in meetings increases involvement with the organization and is likely to increase the motivation to talk about the organization to other people.

4.4. Science communication as a form of reciprocity

In this paragraph perspectives of notarial donors on science communication as a form of reciprocity will be presented. No questions were asked in the online survey on reciprocity, therefore the perspective of individual donors are not taken into account.

4.4.1. Donors would like to know how their money is used

All notarial donors who participated in the interview believed information on scientific research must be provided by NLR, either through mail, the email newsletter or placed on the website. They believe that if NLR supports scientific research with money of the donors, they also have the obligation to communicate to donors the content of these research projects.

I: Can you explain why you believe it is important to receive information on scientific research on leprosy?

D14: Yes, if the Netherlands Leprosy Relief communicates information on scientific research you gain more understanding of where the organizations stands for and what their work activities are. It is not only the nice encampment, with houses and care and that's it. No, just for that matter, I think it is important to let the donors know exactly what you are doing. (Man, 65)

I: Can you explain why you would like to receive information on scientific research?

D22: Yes, well I think when a part of the budget is going to research, it is important to ensure this is also communicated to the donors, that it is not only the flow of money to patients to support costs of living and medication. (Man,66)

According to these respondents NLR should communicate to their donors what kind of research projects they support. The respondents reveal their image of NLR changes now they know NLR is doing more than only offering care and support for leprosy patients. Communication of scientific research shows to them the full scope of what NLR is doing.

4.4.2. Showing appreciation through communication

As described above, some donors believe NLR should provide information on scientific research, because it broadens their perspective on the work of NLR. There were also two respondents who considered communication of scientific research as important, because it shows to them their donation is appreciated.

I: Would you like to receive information on scientific research on leprosy?

D18: Yes, but very concise (..) I think it also shows, that the donor will think hey, the Netherlands Leprosy Relief is thinking about me, which will have a positive effect. The question will still remain whether everyone will share this thought, there will always be people who do not like an overload of information. (Man, 69)

I: Would you like to receive information on scientific research on leprosy?

D21: Yes, I think if they would offer more digital information on research on the website, for

instance you can click on a link and receive more information then I would feel more involved as donor. And when you are more involved, you also stay excited for it. (Woman, 55)

Communication of scientific research means for these donors that NLR thinks about them and appreciates their donation, this can result in an increase in involvement, as mentioned by respondent 21. One other respondent indicated NLR often tries to show what they have achieved, but they do not attribute the achieved successes to their donors. He believed, NLR should invest more effort in communicating their appreciation of the donors contribution. These findings showed some donors consider science communication as a form of reciprocity, which NLR has to offer to the donors. However, other donors believe NLR should invest more in showing appreciation to the donors in their communication.

4.4.3. Showing reciprocity through participation

Another method to show reciprocity is to offer donors an opportunity to get more involved in the organization and to let them know the organization is interested in their opinion. One of the respondents gives an example of how the input of donors can be used in a meeting on the topic of scientific research.

D16: What you basically do in a meeting about scientific research is testing, the same you are doing now. Testing like, we spend our money so and so, and then, are you willing to support us in this way. And you can do that, by taking people seriously and explaining the road towards it. (...) Well you exist because of the donors, so it might be good to say, what can I mean for you? Than it might be good to start a discussion like, do we have to spend 10% on research, of could we spend more, now we are so close. (Women, 61)

The quote of this respondent implies involving donors in discussions is also a form of reciprocity. Her suggestion is to involve donors by asking them what percentage they think the organization should spend on supporting scientific research on leprosy. By involving the donors in these kinds of discussions, the organization can test whether the donors are willing to support research projects. Another respondent agrees NLR should involve the donors more in activities and discussions on certain issues. She believes when NLR should invest more effort in getting to know their donors, the donors will also be more willing to support NLR in all kind of ways.

D21: They do not know what kind of donors they have, and how they can support them. Well, I see 16 schools per year because I teach a course via the GGD. Well and if there is material, I can take some leaflets with me from the Netherlands Leprosy Relief. That is just a small effort.

This quote also implies a certain kind of reciprocity, when NLR would invest more effort in getting to know their donors, donors will also be more willing to support NLR.

4.5. Trustworthiness and visibility of NLR

As shown in the model of Arnett (2003) prestige is a concept which is likely to influence donor identity and promoting and donating behaviour. Prestige of an organization is believed to be an indicator of organizational success, it shows whether the organization achieves goals and makes progress. As the literature shows donors believe in organizational success is often based on feelings of trust in the organization. In this study it was assumed that identification of donors with organizational success, depends on donors perception of trustworthiness of NLR and research. This

paragraph will present the findings on donors' perception of trust in NLR and research, and how visibility of NLR in the media increases identification. The online survey included no questions on this topic; therefore the individual donors are not included in this paragraph.

4.5.1. Confidence in NLR and scientific research

The data of the interviews among notarial donors showed they donate money based on a feeling of trust that NLR will use their money wisely and book progress. The majority of the respondents believed supporting scientific research is part of a non-profit organization and necessary in order to tackle the problem of leprosy. Although they often did not know the content of the research projects, they were confident NLR supports only research projects which are necessary and well conducted.

I: Do you believe it is important the Netherlands Leprosy Relief supports scientific research on leprosy?

D13: I think we blindly assume that what happens makes sense. It is a matter of, you do not need to read all of it, but it is the feeling of trust you have. Until something goes wrong, and you think why are we supporting this club? I cannot remember something happened at the Netherlands Leprosy Relief, it is actually a fairly small, quiet club, and I appreciate that, I think it is actually quite positive. (Woman, 73)

This respondent explains she has confidence in NLR and scientific research, because she never heard any negative publicity about NLR. Therefore, she states her trust in NLR will remain, until something goes wrong. The following respondent indicates she has to trust NLR because she is not able to control everything herself. Her quote reveals her feeling of confidence in research will increase when she knows other experts reviewed the research projects.

D3: You can for instance declare, these experts, or scientists have looked at the research projects and were very positive about it. I am not able to do everything as human being, we are not able to control everything, so you just have to trust it. (Woman, 65)

Another respondent told the interviewer he once supported a non-profit organization because he valued the goals they wanted to achieve. However, over time he noticed their goals were changing, this caused him to stop his donation. Therefore, he considered it as very important to follow what the organization is doing with his money, and whether they are still committed to their goals. When an organization is changing their goals he would like to know this, to be able to decide whether he want to continue his donation or not. According to the following quote, the trustworthiness of an organization is based on whether they are still aiming to achieve their goals. He mentioned it is very important the Netherlands Leprosy Relief clearly communicates everything to their donors, so his confidence in the organization will remain.

D18: I want to be able to follow the activities of an organization at high level. So, when I doubt whether an organization is still aiming to achieve their goals, I want to be able to check it, to gain more information, and based on this information I want to be able to make a decision on whether I will continue my donation or not.

According to these findings, donors' confidence in NLR and research is primarily based on not hearing negative publicity, knowing experts reviewed research projects and knowing NLR carries out activities aimed at achieving their goals.

During the interviews the notarial donors were also asked whether they would like to know which universities or research institutes conduct research on leprosy. It was assumed feelings of trust would increase if donors would know the research projects were carried out by universities and research institutes which guarantee a certain quality and credibility. However, the majority of donors indicated it is not a necessity to know in where research is conducted. It was interesting to notice three respondents mentioned research is no longer a guarantee for quality and credibility since the fraud of 'Stapel' was brought to light. During the data collection period, the fraud of 'Stapel' frequently appeared in the news and could have influenced the opinion of donors on universities and scientific research.

4.5.2. Visibility of NLR and scientific research in the media increases identification

The possibility of using the media to convey successes of scientific research was mentioned by several donors. One of the respondent explained the group of higher educated people in the Netherlands is increasing. He thinks this creates possibilities for NLR to come forward with the message they support scientific research on leprosy. The donors believed, NLR should first of all provide information on research projects to their donors, but also seek publicity to convey this information to the public.

I: How, or through which channels would you like to receive information on scientific research?

D14: Euhm, well, yes I think you should first of all publish information in the Klepper. But, well, you can also, I think that it is effective to publish it in the press. So donors of NLR can say, he I donate to this organization, and that is more effective than publishing only in the Klepper. It is logical that you convey this information through the Klepper, but when it comes to you via the news or via other channels, the opportunity for people increases to declare, I support this organization. (Man, 65)

D13: We thought, actually you do not want to receive this information via a leaflet to the donors, but simply publish it in the newspaper. When you have something to tell like, we discovered this, or we developed a vaccine, you want to receive this information through the media, like television, radio, and you will think, that is our club, how nice! (Woman, 73)

These quotes show that, if NLR would convey the results of scientific research on leprosy in the media, the opportunity for donors to identify themselves with NLR increases. Besides, when NLR is more visible in the media, donors will be more likely to tell other people they support NLR. One notarial donor mentioned NLR should profile itself more by conveying information on scientific research as well to the donors as to the public. The opinion of this donor corresponded to the opinion of three researchers, who also stated NLR should profile itself more with scientific research, as described in paragraph 1.1.2.

D8: Well, of course, when you reached a milestone in you research, I would say, well the Netherlands, the government and politics, all strive for a knowledge economy. And if the

Netherlands Leprosy Relief would declare they are one of the leading institutes in the world, regarding financing scientific research on leprosy, well, be good and tell it! (Man,71)

These findings showed donors believe NLR should profile itself more with scientific research, and seek publicity with results from research. However, it seems identification with NLR does not directly increase because of successes achieved with research, but because visibility of NLR in the media. The findings show that visibility of NLR in the media is likely to stimulate identification among donors and increase promoting behaviour.

4.6. Uncertain whether satisfaction increases through science communication

The concept of satisfaction was measured by asking the notarial and individual donors whether they would appreciate to receive information on scientific research, what kind of information they would like to receive and through which channels. It was interesting the opinions of notarial donors and individual donors differed on whether they would like to receive information on scientific research.

4.6.1. Differences and similarities between notarial and individual donors

All notarial donors who participated in the interview, except one, indicated they would like to receive information on scientific research. However, the preferred amount of information differed among the respondents. While some respondents stated they only want to receive information on research findings, once a year and very concise, other respondents mentioned they would like to get a monthly or quarterly update on how research is proceeding. Among the respondents of the survey 75% indicated they would like to receive information on research, while 25% did not want to receive information on research, for a variety of reasons, such as *'I already receive enough information'* or *'I am not interested'* or *'NLR is a reliable organization, I am confident research is properly done, so I do not need to receive information'*. It is interesting to notice a difference between the group of notarial donors who, all except one, want to receive information on research, while 25% of the individual donors have no need to receive information on research. Due to the differences between the individual and notarial donors it is uncertain whether communication on scientific research will increase satisfaction with NLR among all donors.

Both the notarial and individual donors were asked what kind of information on scientific research they would like to receive. The results of the online survey are shown in Figure 4. Of all the individual donors, 68% would like to receive information on how research results are applicable in leprosy control in the field, and 61.3% would like to receive information regarding the aim, progress and results of research. The results of the individual donors corresponded to the data of the notarial donors. The notarial donors also mentioned they would like to receive information on the aim, progress and results of research, and they expressed the need to see how research contributes to solving the problem of leprosy.

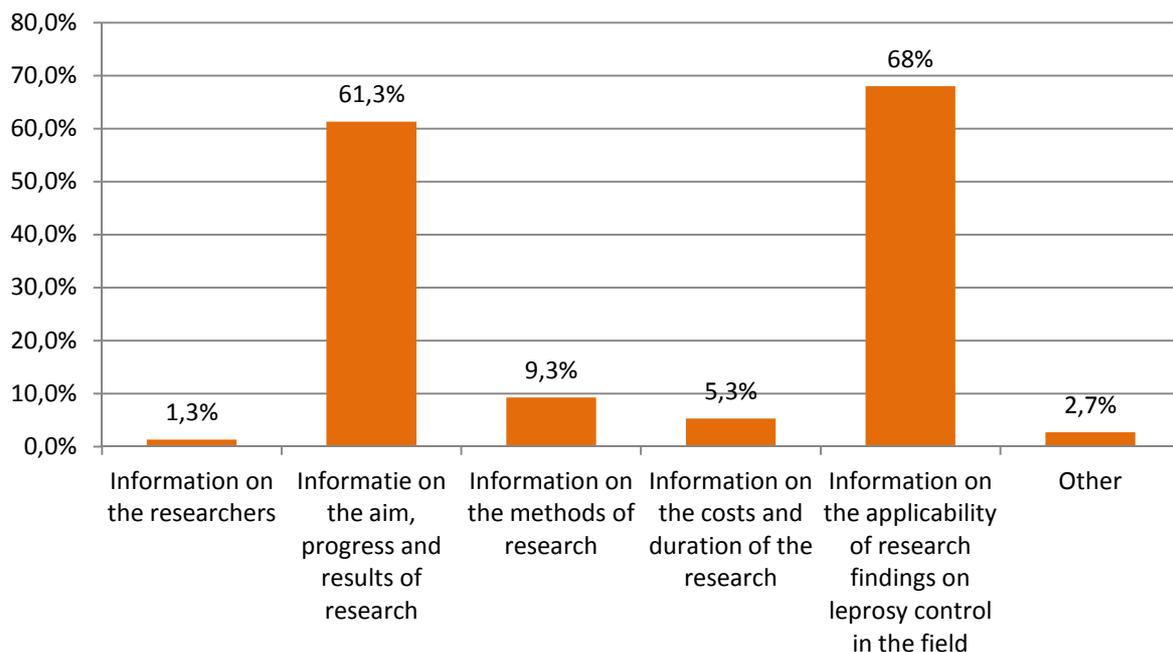
I: What kind of information would you like to receive on scientific research?

D23: I would like to know, step one, why is this research important and why do they want to support it. And, after supporting this research for four years, I also want to understand what this research has brought is, and be able to explain the relevance of this research to others. (Woman)

D22: I would like to know how to position this scientific research, how does it fit in the larger picture of what NLR is doing. What is it going to contribute in the future, how does it contribute to solving the problem of leprosy? (Man, 66)

These respondents mentioned it is important NLR shows the relevance of scientific research and how it contributes to the vision and mission of NLR. Respondent 23 indicates it is important to understand what these research projects have brought us, so she can explain to others why it is important to support this research.

Figure 4: What kind of information would you like to receive regarding scientific research on leprosy? (* two answers allowed)



4.6.2. Offer donors the opportunity to specify the need for information

The data showed all notarial donors are satisfied with the work of NLR and the communication to the donors. Many respondents note they are overwhelmed by all the information they receive from other non-profit organizations they support. Therefore they appreciate the low frequency (four times a year) whereby NLR transmits information to the donors.

All notarial donors except one received information from NLR by mail. Half of the respondents (n=10) stated they rather receive information digitally, because it would reduce the costs. The data showed respondents would like to be able to indicate themselves how much information they would like to receive and through which channel, digital or by mail.

D13: The kidney foundation does it actually quite nice in my opinion, they asked what kind of information would you like to receive. Would you like to receive information regularly, would you like to receive information once a year, some kind of overview of where the money went too, or do you want to receive nothing. Then you could just indicate, I want this or that, and that was so pleasant. (Woman, 73)

D16: If people could indicate in advance what kind of information they would like to receive, it would also reduce the costs. (Woman, 61)

These quotes indicate some donors have a need to make their own choices regarding how much and what kind of information they would like to receive from NLR. They would like to see NLR investing more effort in asking donors what kind of information they want to receive, and whether they want to receive information digital or by mail, because it will reduce the costs. If donors are able to make their own choice regarding how much information they want to receive and through which channels, satisfaction with NLR might increase.

Regarding information on scientific research, the majority of the notarial donors would like to see a short, understandable story on research be published in the Klepper, either online or by post, with a reference to more information on the website. So, donors are able to decide themselves, whether they want to read more detailed information or not.

D12: You could for instance, communicate information on scientific research in a simplified version in the Klepper, and make a reference to the website for more information. (Man, 62)

D8: I would at least, expand the website with a paragraph on scientific research. Tell the donors in a short message which research projects are supported, and for more information, visit the website. (Man, 71)

These quotes confirm donors believe information on research must be provided to the donors either by mail or on the website. However, donors would like to be able to decide themselves whether they want to read more detailed information about a certain research project or not.

4.7. Communicate scientific research as a need

As described in chapter two, the motivation to donate money increases when people believe help is needed. It was hypothesised NLR could communicate scientific research on leprosy to the donors as a need. This paragraph will present the findings on whether donors think scientific research is needed. The perspective of the individual donors are not included in this paragraph, because perceived need was not part of the questionnaire.

4.7.1 Notarial donors question the necessity to conduct scientific research on leprosy

During the interviews ten notarial donors (48%) mentioned they did not know NLR supported scientific research on leprosy. Six of these ten respondents questioned whether there is still a need to support scientific research, according to them everything is already known about leprosy.

D2: We discussed this very often, but is it not a waste to spend so much money and time on a disease in retreat? (..) I mean, diseases such as tuberculosis and polio and all that sort of things, of course, there has been a period of intense research, but leprosy is already beyond that period, right? (Man, 73)

D10: Well, I think a lot of knowledge is already acquired in the field of leprosy, so scientific research is not really necessary. (Man, 80)

I: How do you feel about the fact the Netherlands Leprosy Relief supports scientific research on leprosy?

D22: I think, I am not sure, but in my view the underlying problem of leprosy is already known, and medicines are already developed. It is just a matter of providing medication at the right time

and therefore, you need money. But that is pretty simplistic. I do not know whether there is a necessity to conduct scientific research..(Man, 66)

These three respondents believed a lot of knowledge is already acquired in the field of leprosy, and they questioned whether there is a need to conduct scientific research on leprosy. The perspectives of the donors were contrary to the perspectives of the researchers. As shown in paragraph 1.1.1., the researchers indicated that scientific research on leprosy is necessary because so much is still unknown.

4.8. Summary

The previous paragraphs described the findings on how participation, reciprocity, prestige, satisfaction and perceived need play a role in science communication and whether they can enhance the relationship between NLR and donors. According to the researchers, the donors should know scientific research is important because there is still so much unknown around leprosy, and research is necessary in order to book progress in leprosy control and eradication. These findings were contradictory to the perceptions of the donors, who questioned the need to conduct scientific research, because they thought everything about leprosy is already known.

Donors of NLR distinguished themselves from other people who donate to major medical organizations in the Netherlands. They believe smaller organizations, like NLR, receive less money and will use the money more efficiently. According to the notarial donors and researchers, organizing meetings might be an effective method to establish dialogue on the topic of scientific research between donors, researchers and employees of NLR. Going into dialogue will offer an opportunity to explain the content of research projects, ask the donors for input, and learn from each other. The opportunity to participate in discussions and to have personal contact with researchers and employees of NLR, increases involvement which is likely to influence promoting behavior.

Notarial donors and researchers perceived science communication as a form of reciprocity. The findings showed confidence of donors in NLR and research was based on a variety of reasons, like no negative publicity, ensure that experts review research projects, and knowing NLR carries out activities aimed at achieving their goals. Researchers and donors both believe NLR should profile itself more with scientific research and seek publicity. Visibility of NLR in the media is likely to increase identification of donors with NLR and might result in promoting behaviour. No consistent evidence was found on whether science communication increases satisfaction with NLR.

5. Discussion and conclusions

The main research question of this study was: *'How can the Netherlands Leprosy Relief improve relations with their donors through communicating scientific research findings on leprosy?'*. Notarial donors and researchers have been interviewed and an online survey among individual donors was conducted to answer this question. In this chapter the four main conclusions will be described. Each conclusion will be compared to literature, thereafter implications and recommendations will be formulated. Lastly, limitations of this research will be explained and recommendations for further research will be given.

5.1. Reciprocity through participatory science communication can improve relationships

According to the findings of this study science communication should be perceived as a form of reciprocity in the relationship between NLR and donors. Donors and researchers believed information on scientific research must be communicated, because donors should know in what research projects their money is invested in and why it is important to support research. Besides, communication of scientific research shows the donors the full scope of activities NLR is carrying out.

Because communication is an interactive process taking place in the context of relationships, reciprocity of science communication should not be considered as a one way information transmission from NLR to the donors, but as an interactive process. The findings of this study provide support for offering reciprocity through participatory science communication. As the results showed participating in meetings provided the donors an opportunity to interact with people of the organization and express their opinion. After these meetings, donors felt more valued and committed to the organization, and they felt a stronger need to share their experiences with others. Furthermore, researchers reported they were prepared to explain their research to donors and interact with them. Based on these conclusions, meetings with donors, researchers and NLR are considered as a potentially effective method to communicate about science. During these meetings opportunities must be created for the donors, researchers and employees of NLR to exchange knowledge and learn from each other. Participation in these meetings could increase feelings of involvement and contribute to an improved relationship. In addition, when donors become more involved with NLR, promoting behaviour is likely to increase. Therefore, it is concluded that offering reciprocity through participatory science communication is likely to improve the relationship between NLR and their donors.

Findings compared to literature

The findings of this study showed donors believed science communication is a form of reciprocity in the relationship between NLR and their donors. This finding can be explained by the psychological contract which exists between non-profit organizations and donors or volunteers. The psychological contract is defined as the beliefs of an individual regarding their own obligations in a relationship and the obligations of the other party (Farmer & Fedor, 1999). Farmer and Fedor (1999) carried out a study on the psychological contract approach to understand the behaviour of volunteers of non-profit organizations. They found reciprocity is an important aspect of the contract. In the non profit sector reciprocity is often expressed by showing gratitude and appreciation to the volunteer or donor. Farmer and Fedor (1999) found volunteers would like to see organizations put effort in involving them and showing them how their work contributed in achieving the goals of the

organization. According to Farmer and Fedor, organizations should develop two-way relationships with volunteers, where both the organization and the volunteer provide input. Showing the volunteers their contribution is valued creates positive feelings and enhances the relationship (Farmer & Fedor, 1999). Based on the psychological contract approach of Farmer and Fedor (1999), it can be argued that donors of NLR believe communication of scientific research is part of the psychological contract they have with NLR. Therefore they believe NLR has the obligation to communicate the content of research projects to their donors.

The findings of this research provide support for the role of participation in the 'identity salience model of non profit relationship marketing success' of Arnett (2003), as described in paragraph 2.3.3. The model assumed participation reinforces donor identity and increases supportive behaviour among donors (Arnett et al., 2003). The findings of this study confirmed that participating in meetings reinforces donor identity, because respondents indicated their feeling of being valued as donor increased after going these meetings. Besides, they were eager to share their experiences with others, which shows that participation leads to an increase in promoting behaviour. Furthermore, the findings of this research showed personal contact with employees of the organization increased involvement with the organization. These findings are confirmed by the research of Laverie (2002) among supporters of a sports organization. When supporters engaged in activities where they had the opportunity to interact with employees of the organization, involvement and attachment to the organization increased (Laverie & Arnett, 2002).

A conclusion of this study is to use participatory science communication to create learning opportunities for donors and researchers through dialogue. Nowadays, a lot of effort is being made to bring science and the public together in dialogue, for instance through organizing citizens jury's and consensus conferences. These initiatives are organized to initiate communication between science and the public, and bring them together (Mikulak, 2011). According to Wynne (1992) knowledge exchange between experts and lay public creates learning opportunities for both parties (Wynne, 1992). In addition, Davies (2008) notes that the public has certain knowledge that might be useful for scientists. Therefore, scientists must consider the public as an active, opinionated group of people. According to her, two-way dialogue between science and society must be encouraged, whereby all forms of knowledge should be acknowledged (Davies, 2012). These findings offer support for bringing donors, researchers and NLR together to start a dialogue around the topic of scientific research. Dialogue provides all parties an opportunity to learn from each other and increases feelings of involvement and commitment.

Implications and recommendations

The findings of this study imply that NLR could offer reciprocity through participatory science communication to improve relationships. Stirling (2008) argues in his article there are different intentions to engage in participatory appraisal. He defines appraisal as a process of communication in which knowledge, understanding and evaluations are constructed. In this process actors come together and learn from the differences between their own values and interest and that of others. Stirling (2008) makes a differentiation between normative, instrumental and substantive imperatives underlying participatory appraisal. These imperatives are considered to be important when looking at participatory science communication between NLR and their donors. First of all he describes normative imperatives, which consider the process of appraisal as a good thing in itself, no matter

what the outcomes are. For NLR this would imply that dialogue between NLR, researchers and donors in itself is a good process no matter what the outcomes are. Second, there are instrumental imperatives, which are aimed at achieving particular favoured outcomes. The outcomes are defined by the organization or institution, whereby the process is not taken into account (Stirling, 2008). For NLR this would for instance imply they set up focus groups guided by an employee of NLR to talk about scientific research. The requirement for this focus group is to achieve outcomes which are in line with the interest and values of NLR. NLR could then use this focus group to confirm their own interests. Lastly, there are substantive imperatives, which are also focused on the outcomes, instead of the process. However, the difference with the instrumental imperative is that the outcomes are not defined as particular values or interest imposed by the organization. The substantive imperatives focus on developing explicit, socially debated and reasoned criteria for the outcomes themselves. This imperative highlights the importance of including lay knowledge, because it can help to broaden the perspective of the experts. In the substantive imperative the public is not an object of discourse, but they are engaged as subjects. For NLR this would imply they perceive their donors as people with useful knowledge and experience, which should be included in decision making processes around scientific research. Stirling (2008) notes that these three different kind of imperatives display different kind of powers. The normative imperative will increase power inequalities. The instrumental imperative will use power to achieve certain outcomes, while the substantive imperative has nothing to do with power (Stirling, 2008). For NLR it is important to consider these three imperatives when initiating participatory science communication. I would recommend NLR to start a participation process based on substantive imperatives, which are focused on including donors as subjects in discourse. During the process of participatory science communication, can for instance be initiated between donors, researchers and NLR, to talk about the criteria for supporting research projects. The goal of using participatory science communication is to stimulate donors, researchers and NLR to interact with each other, exchange knowledge and enhance the learning process.

Considering the practical recommendations for NLR, it is important to mention there were also donors who were not interested in the process of participation, due to a lack of time or interest. However, these donors do like to receive information from NLR on scientific research. Regarding the format of information on scientific research, the donors prefer to receive a short, clear message on the aim, progress and results of research through the Klepper or the email newsletter. It is important to show in these messages how research fits into the vision of NLR and contributes to the life of leprosy patients. In addition, a detailed version of the research project must be provided on the website. Some donors and researchers suggested the possibility of using Youtube movies to transmit information on research. Furthermore, it is important to always offer the donors an opportunity to respond on the information they read in order to increase involvement with NLR. Lastly, the frequency of information should be tailored to individual needs of the donors. NLR could for instance ask the donors how much information on research they prefer to receive and through which channels, either digital or by mail. Investing effort in adapting information to the needs of the donors will be appreciated by the donors and might improve the relationship.

5.2. Communication influences perspectives of donors on scientific research

It can be concluded that there is a significant difference in perspective between researchers and donors on the necessity to conduct scientific research on leprosy. While, the researchers believe

scientific research on leprosy is necessary because there is still so much unknown, the donors questioned the need to conduct research on leprosy; according to them everything is already known. So far, NLR has not communicated about scientific research very often. The focus in their communication is on providing care, support and medicines to leprosy patients. Therefore, this difference in perspective is likely to be caused by a lack of communication on the site of NLR.

Findings compared to literature

The model of Arnett (2003) states that perceived need is likely to have a direct impact on donating and promoting behaviour. In this study it was hypothesised that scientific research could be communicated to the donors as a need. The findings of this study did not provide support for or against the influence of 'scientific research as a need' on donating and promoting behaviour. The results showed six donors questioned the necessity of conducting scientific research on leprosy. It is widely known that communication has the potential to influence perceptions of people. McQuail (2005) describes that during the process of communication influence is exerted. Messages transmitted through media have the potential to influence opinions of individuals, for instance by providing information about the existence of certain issues (McQuail, 2005). Therefore it is assumed that a lack of communication on scientific research on the side of NLR, might have caused the donors to believe that scientific research is not necessary anymore.

Implications and recommendations

The findings imply that a lack of communication on scientific research influenced donors perception and caused them to think research on leprosy is no longer necessary. Therefore, I would recommend NLR to put more effort in communicating scientific research as a need. Sargeant (2007) reviewed the literature on gift giving behaviour and he found giving is likely to increase, when the need is communicated clearly, and solvable in a certain time frame (Sargeant & Woodliffe, 2007). Based on these findings, science communication should thus focus on a specific kind of need for each research project in a specific time frame. Communicating scientific research as a need might raise awareness among the donors that scientific research on leprosy is still necessary to eliminate leprosy in the world. This may result in a confirmation of their donor identity and influence donating and promoting behaviour.

5.3. Visibility of NLR in the media increases identification and promoting behaviour

It can be concluded that visibility of NLR in the media is likely to increase identification with NLR among donors and influence promoting behaviour. The results showed that donors and researchers believed NLR should seek publicity to raise awareness about their existence and profile themselves with the scientific research they support. When NLR would be more visible in the media, this creates opportunities for donors to identify themselves with NLR and tell others they support NLR.

Findings compared to literature

Arnett (2003) showed in his study that organizational prestige increases identity salience among alumni of the university and affects promoting behaviour and donating behaviour (Arnett et al., 2003). This study does not provide support for or against the influence of organizational prestige on donor identity and supportive behaviour. However, the findings showed that, when NLR would seek publicity to raise awareness about their existence, and to profile itself with scientific research on leprosy, identification with the organization is likely to increase. The phenomenon of identification of

consumers with organizations has been studied well. Bhattacharya (1995) defines identification as a feeling of belongingness to the organization. He carried out a study about how organizational and product characteristics, affiliation characteristics and activity characteristic correlate to members identification with an organization. He found that identification is positively related to organizational prestige, duration and visibility of membership, confirmation of member's expectations, donating activity, and contact with the organization. Based on his findings he recommends organizations to develop communication strategies focused on letting the members know they support a worthwhile cause. Furthermore, he recommends organizations to create opportunities for contact to strengthen identification among members of the organizations. In addition, Mael and Ashforth also confirmed that contact with the organization increased identification (Mael & Ashforth, 1992). Besides this, Bhattacharya (1995) recommends to increase prestige, for instance by linking celebrities to the organization, in order to increase identification among members (Bhattacharya et al., 1995). Although this literature states prestige of an organization increases identification among donors, the findings of this study showed that instead of showing achieve organization prestige and success , seeing NLR more visible in the media (e.g. with fundraising advertisements, or information on scientific research on leprosy) is already likely to increase identification among donors.

Furthermore, this study found identification is likely to lead to an increase in promoting behaviour. When donors would see NLR in the media, they identified themselves with the organization, and were more eager to talk about NLR with other people. The influence of identification on promoting behaviour is confirmed by literature. Arnett (2003) found that identification has a positive influence on promoting the university to others. In addition, Brown (2005) also showed identification with an organization directly influences positive word of mouth (Brown, Barry, Dacin & Gunst, 2005).

Implications and recommendations

The conclusions imply that increasing visibility of NLR leads to an increase in identification among donors with NLR. Therefore, I would recommend NLR use the media, for instance through free publicity, to convey fundraising advertisements and to raise awareness about the existence of NLR. Besides, I would advise them to profile themselves more as an organization which supports high quality scientific research on leprosy. They could for instance use leaflets, television or radio commercials or the internet to come forward with this message. An increase in donor identification with NLR will lead to more promoting behaviour.

5.4. Increasing trustworthiness of NLR can contribute to an improved relationship

The results showed that donors have confidence in NLR and in the fact they support scientific research on leprosy. However, the donors mentioned a variety of reasons when they were asked to explain why they trust NLR. While, some donors say trust is based on the fact they never heard negative messages about NLR, other say they remain confident as long as NLR puts effort in achieving its goals. Trust in scientific research was debatable, since the 'fraud of Stapel' came to light. However, if donors would know experts reviewed the research projects confidence would increase. Based on these findings it can be concluded that an increasing donors trust and trustworthiness of NLR might contribute to an improved relationship between NLR and their donors.

Findings compared to literature

The findings of this study showed donors have confidence in NLR. Literature states that trust is often primarily based on knowing that the other party is trustworthy and will deliver what he promised to

do. So in the context of non-profit organizations, organizations should be able to show they achieve their goals (Sargeant & Lee, 2004). According to Shabbir (2007), trust is critical in the development of long-term relationships, because it is a predictor of donor satisfaction (Shabbir et al., 2007). Sargeant and Lee (2004) state trust in a relationship increases commitment. Besides, higher levels of trust are associated with higher levels of support (Sargeant & Lee, 2004). Based on the literature confidence of donors and trustworthiness of NLR seem to be important for establishing a good relationship, because donors trust is an important determinant for loyalty and commitment. According to Sargeant (2002) organizations can foster higher levels of trust through communication. He recommends non-profit organization to be transparent and show the process through which they have achieved certain results. Besides, they should show the competences, knowledge and abilities which are present in their organization (Sargeant & Lee, 2002).

Implications and recommendations

The finding of this study and the literature described above imply that donors trust and trustworthiness of the organization are important in the relationship between non-profit organizations and their donors. According to the literature described above, trust is a very important antecedent of perceived relationship quality. However, donors trust in the organization is also related to whether the donor perceives the organization as trustworthy. Wynne states in his article, trustworthiness of an organization is basic to the uptake of knowledge among people (Wynne, 1992). This means that donors are more likely to utilize scientific information when they consider NLR as trustworthy. According to Wynne (2006) organizations can build trustworthiness by being openly self aware and self reflexive. Furthermore, he states that an organization should be willing to take responsibility for their own trustworthiness instead of trying to manage and control the responses of the other. They should not impose their own projections on the other, but listen to them and take their concerns seriously in order to increase their own trustworthiness (Wynne, 2006). Based on this literature, I would recommend NLR to build on their trustworthiness by listening to the donors, go into dialogue about the concerns they may have regarding scientific research on leprosy. It is known that outcomes of scientific research are sometimes hard to understand and intangible. NLR should therefore, be able to show they reflect on the research projects they support, by explaining the process through which research is supported and conducted. Besides this, they should openly express how the outcomes of research have benefited the leprosy patient. Important in this matter is that NLR expresses towards the donors they are willing to go into dialogue with the donors about scientific research, listen to them and take their concerns into consideration. When NLR would do this, their trustworthiness might increase, which might results in an improved relationship.

5.5. Limitations and strengths of this study

It is important to express a number of strengths and limitations of this study. This paragraph will highlight the strengths and limitations regarding the study population and the methods used for data collection. Thereafter the limitations of the theoretical framework will be discussed.

Reflections of the study population and methods used for data collection

Three different groups were incorporated in this study, the notarial donors, individual donors and researchers. Due to the use of diverse groups, interesting similarities and differences came forward from the data. For instance, all notarial donors mentioned they want to receive information on scientific research, while 25% of the individual donors indicated they prefer not to receive any information on scientific research. Furthermore, ten notarial donors were interested in meetings on

scientific research, while only 3 of the 75 individual donors, who filled in the questionnaire, indicated they would go to a meeting on scientific research. A possible explanation is that the group of notarial donors might have been biased. They may have had a higher degree of interest in scientific research or felt more committed to NLR and therefore decided to participate in the interview. The individual donors who filled in an online survey are perhaps to a lesser extent involved with NLR. This might have caused the differences in outcomes between these two groups regarding 'interest in participating in meetings' and 'receiving information on scientific research'. Although this might have been a limitation of this study, it also confirms the importance of taking the group of individual donors into account, because they might be more representative of the total donor population of NLR than the group of notarial donors. However, it remains difficult to make generalizations based on the findings of this study, because it was not possible to draw a random sample from donor population.

Another limitation of this study is that interviewer bias might have occurred during data collection. Some respondents were not so eager to give information; therefore the researcher gave explanations of the questions and provided examples of answers, which might have led to responses driven by the researcher instead of the respondent.

Data analyses was executed with the 'identity salience model of non profit relationship marketing success' in mind. However, the researcher herself also brought a certain frame of reference which influenced how data were analysed and results have been interpreted. This is regarded as a limitation of this study, because data analyses could have been biased by interpretation of the researcher. Therefore, it is recommended for further research to use multiple researchers during data analyses who can supplement and contest each other's interpretations.

Reflections on the theoretical framework

The 'identity salience model of non profit relationship marketing success' has only been tested in quantitative studies, while I used this model in a qualitative study. Using qualitative methods to study the role of science communication with this model is considered a strength, because in-depth information could be collected during the interviews on the role of science communication.

Based on the findings of this study I would consider the concept 'perceived need' as a relationship inducing factor, instead of a non relationship inducing factor. Arnett (2003) considered perceived need as a non relationship inducing factor which directly influences donating and promoting behaviour. However, according to the findings of this study, and based on literature, perceived need can also be regarded as a relationship inducing factor, which increases donating and promoting behaviour through reinforcing donor identity. For instance, when a non-profit organization that aims to solve the problem of poverty, communicates famine in Africa as a perceived need to their donors, this might reinforce donor identity. Because, one of the reasons why donors give to an organization is because they share the same values and goals (Morgan & Hunt, 1994; Sargeant & Woodliffe, 2007). So, communication of famine as a need, is likely to affirm the motivation of donors to give, and thus reinforces their donor identity. In the context of this study, scientific research on leprosy can be communicated as a need to achieve eradication of leprosy in the world, which might reinforce donor identity. Therefore, it is recommended to include perceived need as a relationship inducing factor in the 'identity salience model of non profit relationship marketing success'.

A limitation of this model was the concept of donor identity salience. In this study identity salience was defined as 'the relative importance or centrality of a given identity for defining oneself' (Hoelter, 1983). Insight in donor identity was gained by asking the respondents what their motivations were to donate money in general and to donate to NLR in particular. However, it was not possible to measure donor identity in terms of how people perceived their identity of being a donor, as more salient among other identities they hold.

Furthermore, when using a model as framework in your study, the limitation is that you feel compelled to only study the factors described in the model. It is likely that other relationship inducing factors, which were not described in the model, may also affect science communication and play a role in the relationship between donors and NLR. Besides this, the model implies there are linear relations between relationship inducing factors, donor identity salience and donating and promoting behaviour. However, I assume that there may be a two-way interaction between donor identity and supportive behaviour. Partly based on the findings of this study, it seems that promoting the organization to others also strengthens donor identity.

Lastly, Sheth and Parvatiyar (1995) state that relationship marketing needs to focus more on the process of collaboration, exchange of knowledge and value creation between producers and consumers instead of focusing only on the outcomes (Sheth & Parvatiyar, 1995). The model of Arnett (2003) is primarily focused on the outcomes of relationship marketing, like promoting and donating behaviour. This is considered to be a limitation of the model, because the process of collaboration, interaction and knowledge exchange are considered to be even more important in maintaining relationships.

5.6. Further research

The reflections on this study described above also provide recommendations for further research. Considering the model of 'identity salience of relationship marketing success', I would recommend to include perceived need as a relationship inducing factor. Furthermore, I would advise to take a critical look at the assumed linearity of the model, and study whether there are other relationship inducing factors which could influence donor identity. Besides this, in further research on this model the process should be considered equally important as the outcomes. Lastly, the findings of this study show donors trust and trustworthiness of the organization are important determinants of the quality of relationships. Therefore, I would advise further research on the influence of these determinants in relationships and the potential role of science communication therein.

I used the model of Arnett (2003) to carry out a qualitative study on the role of science communication in the relationship between NLR and donors. For further research, I would advise to carry out a quantitative study to confirm or refute the findings of this study. Using quantitative methods you are able to study whether there are significant relations between relationship inducing factors, non relationship inducing factors, donor identity salience and promoting and donating behaviour. Besides this, a broader population of donors can be included in a quantitative study, which increases the potential to make generalizations. on the role of science communication in relationships. It is important to include both individual and notarial donors in the study sample because they have different perspectives, and will provide a realistic representation of the total donor population of NLR.

As described in paragraph 4.5., it remains uncertain whether science communication will lead to an increase in satisfaction. An explanation for this finding might be that during the interviews the concept of satisfaction was not explored in depth. Besides this, there are possible other factors, next to science communication, which probably contribute to an increased feeling of satisfaction. However, further research is necessary to gain more insight in the concept of satisfaction and the role of science communication therein.

Because this research only focused on the existing donors of NLR, it might be interesting for further research to include a younger study sample. A study on how the younger generation perceives the role of science communication might provide more insight in how NLR can attract new, young donors with information on scientific research.

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Annex 1: Interview protocol donors

Introduction:

- Introduce myself
- Explain the purpose of this study. Explain how the opinion of the respondent will contribute to gaining more insight in how Netherlands Leprosy Relief can improve the communication of scientific research findings to their donors.
- Explain duration and structure of the interview.
- Explain anonymity of the respondent will be secured. The transcripts from the interviews will remain confidential.
- Explain the respondent can indicate when he does not want to answer, if a question is unclear he can ask for explanation.
- Ask permission to record the interview with the voice recorder.

Netherlands Leprosy Relief / donating money

1. Can you explain your motivation to donate money to charity? (family tradition, humanitarian reasons, experience in developing countries, contribute to a better world, social norms)
2. How would you describe the Netherlands Leprosy Relief in your own words?
3. How long have you been a donor of the Netherlands Leprosy Relief?
4. Can you describe the situation in which you decided to become a donor of the Netherlands Leprosy Relief?
5. Can you explain what aspects of the Netherlands Leprosy Relief appeal to you?
6. Do you know people in your environment who also donate money to the Netherlands Leprosy Relief?
7. Have you even been in a situation in which you talked about donating money in general or specifically to the Netherlands Leprosy Relief?
8. Can you explain how the Netherlands Leprosy Relief uses the money of donors?

Scientific research on leprosy

9. Were you aware the Netherlands Leprosy Relief uses a percentage of his annual budget to support scientific research on leprosy?
10. Do you know what percentage of the budget is spend on research? How do you feel about that?
11. Do you know what kind of research projects the Netherlands Leprosy Relief supports? Or what kind of research projects do you expect they support?
12. Can you mention some subjects related to leprosy which have been studied with support of the Netherlands Leprosy Relief?
13. Can you explain why scientific research on leprosy is important? (eliminate leprosy, prevent contamination, early detection of leprosy, prevent handicaps, optimize healthcare for patients, rehabilitation, increase interest for leprosy among academics).
14. Do you think scientific research on leprosy is important? Why?
15. Do you know which universities or research institutes perform scientific research on leprosy in the Netherlands? What do you expect?

16. Do you know what kind of researchers are involved in research on leprosy? (discipline, background).

Communication of scientific research

17. How do you feel about the communication of the Netherlands Leprosy Relief to their donors?
18. Have you ever heard something about scientific research findings from Netherlands Leprosy Relief? What was it about?
19. Would you like to receive information on what kind of research projects Netherlands Leprosy Relief supports? Why?
20. What kind of information would you like to receive about scientific research projects on leprosy? (Information on the researchers, the methods, results, applicability, costs)
21. Through which channels would you like to receive information on scientific research findings? (Internet, movies, presentations, via the Klepper, e-mailing, meetings, etc)
22. Do you have any additional ideas on how Netherlands Leprosy Relief can improve the communication of scientific research on leprosy, to their donors?
23. Do you have any additional ideas on how Netherlands Leprosy Relief can improve the communication to their donors in general?

End

- Give a short summary of the interview.
- Does the respondent have any additional thoughts, ideas, opinions to express?
- Explain what will happen with the data of the interview.
- Thank respondent for his cooperation.

Annex 2: Interview protocol researchers

Introduction:

- Introduce myself
- Explain the purpose of this study. Explain how the opinion of the researcher is useful to gain more insight in how researchers think about the communication of their research projects to the donors of Netherlands Leprosy Relief. The insights from the interviews will be used by Netherlands Leprosy Relief to improve the communication of scientific research findings to their donors.
- Explain duration and structure of the interview.
- Explain anonymity of the respondent will be secured. The transcripts from the interviews will remain confidential.
- Explain the respondent can indicate when he does not want to answer, if a question is unclear he can ask for explanation.
- Ask permission to record the interview with the voice recorder.

Netherlands Leprosy Relief

1. How would you describe the Netherlands Leprosy Relief? (From your position as researcher)
2. Do you feel connected to the Netherlands Leprosy Relief? Can you explain how?
3. Can you explain what aspects of the Netherlands Leprosy Relief appeal to you?

Donors

4. Were you aware the Netherlands Leprosy Relief uses the money of the donors to fund scientific research on leprosy?
5. Can you describe what kind of people donate to Netherlands Leprosy Relief?

Scientific research on leprosy

6. What is your background, what have you studied?
7. How long have you been involved in research on leprosy?
8. How did you end up in the field of leprosy research?
9. Why does the disease leprosy appeal to you?
10. What are the research projects in which you have been involved, that were entirely or partially funded by the Netherlands Leprosy Relief?
11. What were the most important research projects in the field of leprosy you have been involved in? Why were these projects important to you?
12. Can you explain what research findings have been applicable in the fight against leprosy, or which have contributed to the life of leprosy patients?
13. Can you explain why scientific research on leprosy is important? (Eliminate leprosy, prevent contamination, early detection of leprosy, prevent handicaps, optimize healthcare for patients, rehabilitation, increase interest for leprosy among academics).

Communication of scientific research

14. How are scientific research findings produced in this institute, or university, communicated to the academic world, the media, society, leprosy patients and organizations in the field?
15. How do you communicate about your work to people who do not have an academic background?
16. Do you consider the communication of scientific research from Netherlands Leprosy Relief to their donors as important? Why?
17. What aspects of scientific research are important to communicate to the donors, according to you? (Information on the researchers, methods, results, applicability, costs, duration)
18. How would you communicate scientific research findings to donors, if you worked for Netherlands Leprosy Relief?
19. What are effective channels to communicate on scientific research, according to you? (Internet, movies, presentations, via the Klepper, e-mailing, meetings, etc).
20. Do you have any additional ideas on how Netherlands Leprosy Relief can improve the communication of scientific research on leprosy, to their donors?

End

- Give a short summary of the interview.
- Does the respondent have any additional thoughts, ideas, opinions to express?
- Explain what will happen with the data of the interview.
- Thank respondent for his cooperation.

Annex 3: Online survey

1. What is your motivation to donate money to charity (two answers allowed)
 - a. Family tradition
 - b. Solidarity/love one's neighbor
 - c. Feelings of guilt
 - d. Faith
 - e. Based on personal experiences (for instance in developing countries)
 - f. Tax benefit
 - g. Other..

2. What aspects of the Netherlands Leprosy Relief appeal to you? (three answers allowed)
 - a. Small scale
 - b. Effective
 - c. Reliable
 - d. Involved with donors
 - e. Result-oriented
 - f. Transparent
 - g. Accessible
 - h. Specifically aimed at one disease
 - i. The severity of leprosy
 - j The suffering caused by leprosy
 - k. The vision and mission of the organization
 - l. Other...

3. Were you aware the Netherlands Leprosy Relief supported scientific research on leprosy?
 - a. Yes
 - b. No

4. Could you indicate what percentage of the annual budget you expect will be spend on supporting scientific research on leprosy?
 - a. Between 5 en 10%
 - b. Between 10 en 25%
 - c. Between 25 en 50%
 - d. > 50%

5. What percentage of the annual budget should be spend on scientific research according to you? (Open question)

6. Do you consider scientific research on leprosy important?
 - a. Yes
 - b. No

7. If yes, why do you think scientific research on leprosy is important? (three answers allowed)
- a. To develop medicines or vaccines
 - b. To gain more knowledge on how the disease develops and progresses
 - c. To gain more understanding of contamination
 - d. To study how stigma surrounding leprosy can be reduced
 - e. To gain more knowledge on how nerve damage develops and can be prevented
 - f. To develop methods for early detection
 - g. To develop methods to improve quality of healthcare in developing countries
 - h. To stimulate interest for leprosy in the academic world
 - i. To create possibilities for young researchers to promote in the field of leprosy
 - j. Other....
8. Would you like to receive information on scientific research on leprosy, supported by Netherlands Leprosy Relief?
- a. No (continue to question 8)
 - b. Yes (continue to question 9)
9. Can you explain why you are not interested in receiving information on scientific research on leprosy, supported by Netherland Leprosy Relief? (open question)
10. What kind of information on scientific research on leprosy would you like to receive? (two answers allowed).
- a. Information on the researchers
 - b. Information on the aim, results and progress of the research
 - c. Information on the methods of research
 - d. Information on the costs and duration of research
 - e. Information on applicability of research findings on leprosy control in the field
 - f. Other....
11. Through which channels would you like to receive information on scientific research on leprosy? (two answers allowed)
- a. Text on the website of Netherlands Leprosy Relief
 - b. Short movies on the website of Netherlands Leprosy Relief
 - c. Once a year a science booklet by mail
 - d. Article via the Klepper
 - e. Article via the e-newsletter
 - f. Lectures, presentations on research
 - g. Other...
12. Do you have any additional ideas on how Netherlands Leprosy Relief can improve the communication of scientific research on leprosy to their donors? (open question)

13. What is your gender?

- a. Male
- b. Female

14. What is your age?

- a. 20 – 30
- b. 30 – 40
- c. 40 – 50
- d. 50 – 60
- e. 60 – 70
- f. 70 – 80
- g. 80 – 90