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Communicating sustainable lifestyles to the young: the empowering potential of new communication approaches involving positive emotional appeal

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ABSTRACT OF DISSERTATION submitted by:
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for the degree of Doctor of Philosophy and entitled: Communicating sustainable lifestyles to the young: the empowering potential of new communication approaches involving positive emotional appeal

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This thesis investigates the effects of traditional and new forms of communicating sustainable lifestyles and sustainable consumption on changing attitudes and initiating behaviour change of young people. The main aim of the research is to investigate by the use of qualitative and quantitative research methods the capacity of new forms of environmental and sustainability communication involving positive emotional appeal and entertainment (the 'ecotainment'/'sustainment' approach) as well as social media tools to positively influence consumer behaviour.

The research develops a deeper understanding of the challenges in communicating and encouraging sustainable lifestyles and issues and uncovers how sustainability perceptions and behaviour are guided by emotions and affect. The research involved empirical studies carried out in Hungary, where there are clear tensions between pro-environmental attitudes and the emerging consumer culture. The target group consists of Hungarian young people belonging to the so-called hard-to-reach lifestyle groups who are less interested in sustainability issues or consumer responsibility towards sustainability. Consumers' motivation, knowledge, values and attitudes towards pro-environmental consumption practices and sustainable lifestyles are explored with surveys, focus groups and participatory scenario-building (so-called envisioning workshops) exercises and their (knowledge, values and attitudes) interrelation about a desirable sustainable future and lifestyles as well as practices among youngsters.

The potentials of the 'ecotainment'/'sustainment' concept – a social marketing concept based on positive emotions and entertainment features (Lichtl, 1999) – in sustainability communication was measured and analysed through its use in visual media and web 2.0 formats. Based on the findings of the research, the contribution of social, media, group, and individual factors to behaviour change are evaluated.

The consumption patterns and habits of young people and youngsters' relationship with sustainability are characterised by contradiction and contestation. While youngsters' role is inherently high on the agenda of consumption research, their desires, role, agency and responsibilities in sustainable consumption research remains still low. Based on the findings, the targeted age group`s engagement in protecting the environment shows a large level of passivity and powerlessness. On the other hand they are more engaged and active in volunteering and involved in community activities (especially at school).

The findings of the study prove the challenging task of reaching and involving youngsters in sustainability. At the same time, the ecotainment/sustainment approach, namely using positive emotional appeal while transmitting information in an entertaining way, with useful tips for changing everyday practices promises to be a useful approach in getting the interest of youngsters – if viewers feel addressed by its theme, design and style. However, the credibility, and even more the passionate and inspirational character of the sender is crucial to activate youngsters in accepting new lifestyles or practices who – based on the focus group discussions – seem to be keen on finding everyday heroes to help guide them towards making the right and "legitimate" decisions in their life. The findings give insights and provide support for the potentials of the approach, especially if it is combined with a two-way communication and communicated with a passionate, inspiring and credible sender.

Keywords: sustainable lifestyles, behaviour change, communication, ecotainment/sustainment.

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1 Introduction

This thesis investigates the effects of traditional and new forms of communicating sustainable lifestyles and sustainable consumption on changing attitudes and initiating behaviour change of young people. 'Sustainable lifestyles' refers here to the concept defined at the Oslo Symposium on Sustainable Consumption and Production (1994) as "the use of services and related products, which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of further generations," covering a broader set of activities including interpersonal relationships, leisure activities, education, sports and material consumption. On the consumer level, sustainable consumption in industrialized countries should promote more efficient (less) and more sufficient (different) lifestyles. More efficiency alone will not be able to deliver solutions since its gains will be offset by growth and rebound effects; instead, changes in deeply rooted values and lifestyles are needed to achieve more sufficient lifestyles (Reisch and Scherhorn 1999, Mont 2007, Jackson 2006) with the "need to find a new way of measuring societies progress beyond financial gains" (Schor 2010, p. 97).

The main aim of the research is to investigate by the use of qualitative and quantitative research methods the capacity of new forms of environmental and sustainability communication involving positive emotional appeal and entertainment features based on social marketing – the so-called "ecotainment/sustainment approach" (Lichtl 1999, Reisch 2009) – as well as social media tools to positively influence consumer behaviour focusing on the youth.

The geographic focus of the research is Hungary; empirical research has been carried out in a medium sized town, Bicske (35 km from Budapest) and in the capital city, Budapest, among

high school pupils in their last 2 years before university. Communication materials were selected and reviewed based on their relevance to sustainability issues through the sustainment concept and on the main topic areas of a sustainable future society envisioned during scenario-building exercises with youngsters carried out as part of the research. The selected visual materials vary considerably both in their content, art and form of presentation, message framing and geographical coverage. They include not only 'sustainability communications' but promising initiatives and practices as well. Examples of social innovation have also been included among the visuals analysed.

The results of the research are targeted at policy makers responsible for designing and implementing interventions aiming to elicit consumer behaviour change, especially among younger generations. The outcome will also be valuable for civil society organisations involved in environmental protection, sustainable consumption and consumer advocacy, as well as for businesses aiming to develop sustainable products, services and sustainable business strategies in communicating sustainability towards consumers in a more effective way.

The overall work is clustered into 8 chapters that complement each other. The introduction outlines the background and rationale of the research carried out for the thesis work, followed by the research questions, the explanation of the choice of the target group of the analysis. As a last section of the introductory chapter the outline and structure of the thesis is presented.

1.1 Rationale of the study

Contemporary social and environmental problems call for systemic, structural changes toward global sustainability in different sectors, particularly in energy, transport/mobility and the food sector (Elzen et al., 2004; Van den Bergh and Bruinsma, 2008; Grin et al., 2010). As problems in these domains are highly complex and uncertain, we need complex and long-term processes of transition in order to sustain the way we fulfil societal needs (Raskin et al., 2002). Such transitions require changes at different levels and also need to incorporate the involvement of multiple stakeholders. Transitions toward sustainability refer to a "radical transformation towards a sustainable society as a response to a number of persistent problems confronting contemporary modern societies" (Grin et al., 2010, p.1.).

At the same time, it has become clear that the consequences from a sustainability perspective of growing affluence and increasing consumption cannot be solved by purely technological approaches and development and that business as usual and technological approaches will not be able to induce behaviour change. While most governments in the developed world have made commitments to sustainable development, existing policies seem to be ineffective and inadequate to solve environmental problems. They reckon mainly on technology and market instruments, with a particular emphasis on 'getting the price right' (Jackson, 2005, Reisch et al., 2008). But governments that have attempted to introduce taxes on pollution and resources have often backed down in the face of opposition, whose effectiveness is due at least in part to media coverage pointing out the probable impacts on consumers and casting doubt on the need for the measures (Jackson, 2005). Chapter 16 on scenarios of sustainability of the Global Environmental Outlook (GEO-5, UNEP, 2012) made it also clear based on the analysis of global scenario results that technical and policy measures alone will not be sufficient to meet global goals or stay within critical thresholds.

Attention and debate on the vision of sustainable development have turned to questions of consumption (Jackson, 2005a, b; Reisch and Ropke, 2004). Consumption has become a relevant dimension of the vision of sustainable development both as a research field (Michaelis, 2000; Reisch and Ropke, 2004) and on the national and international political agenda (Worldwatch Institute, 2004) as was emphasized already at the 2002 UN Summit on Sustainable Development in Johannesburg and again at the Rio+20 United Nations Conference on Sustainable Development held in June 2012.

According to studies carried out in recent years, the following domains cause around 70-80% of life-cycle environmental impacts: food consumption (especially meat and dairy), which accounts for 20-30% of the environmental impact of household consumption, (EIPRO study, 2006), individual mobility (cars, air travel and tourism) and energy use and housing.

Challenges of changing current lifestyles

While a significant part of the required reduction of impacts in these domains can be handled by supply side changes, almost all environmental problems are directly or indirectly linked to consumption, demanding changes in today's consumer behaviour and lifestyles too. This demand comprises a multi-stage process, from the determination of needs to product disposal. Sustainable consumption does not only involve the purchase and use of products, but to a greater degree, the interaction of and dealing with needs and their satisfaction (Reisch and Scherhorn, 1999, Reisch and Bietz, 2011). At the same time, it is crucial to understand the values, worldviews and imageries of generations affected by decisions made today in the coming decades.

The response to this problem has resulted in the formation of international agreements and commitments to achieve the goals of sustainable development and sustainable consumption and production, such as Agenda 21, the 10-Year Framework of Programmes initiated by UNEP (2002, 2009), and the UN launched Green Economy Initiative or the EU specific

programmes for sustainable consumption. In the renewed Sustainable Development Strategy of the EU, SCP is placed as a key priority along with an EU Action Plan on SCP launched in 2008, another important programme has been the UN Decade of Eduction for Sustainable Development 2005-2014. In academic research, various theoretical approaches have been developed with the aim of better understanding consumption patterns and developing policies toward more sustainable consumption by either concentrating on the individual level (such as attitudes, norms, habits, values, lifestyle and knowledge) or on contextual factors (e.g. discourses, infrastructure, the market) (e.g. Jackson, 2005, Tukker et al., 2006, Sanne, 2002, Shove, 2010).

Although the vision of sustainable development emphasized in Rio de Janeiro in 1992 has become a central element of political debates, the concept has failed to become a part of general public awareness – indeed, most people have never even heard of it (Wiebke and Reusswieg, 2000, BCSDH, 2006, WWF and Cognative, 2010). As Flannery agrees, "Despite knowing that we need to live a sustainable life the term "Sustainability" is a word that means almost anything to anyone" (Flannery, 2009, p2). Reisch et al. (2009, p. 193) stress that "sustainability communication is a highly complex and even risky activity that needs careful strategic planning and genuine stakeholder input". In Hungary, only 26% have heard of the term sustainable development and only 3% know what it means while a further 11% said they have some understanding of it (BCSDH, 2006, WWF and Cognative, 2010).

Since consumers are facing increasingly complex circumstances while making their daily consumption decisions, the question of how the decision making process works and choices are made by consumers is crucial in order to achieve change towards sustainable behaviour. While the role of emotions has traditionally been neglected in sustainability or pro-environmental behaviour and communication research (and its measurement) – due to the dominance of rational choice-based action theories in raising consumer awareness – during

the last decade research interest has significantly grown in the field of the role of emotions in consumer behaviour and decision making (e.g. Laros and Steenkamp, 2005) and sustainability communication. According to the literature there are "two parallel, interacting modes of information processing: a rational system and an emotionally driven experiential system" where the latter is "often more compelling and more likely to influence behaviour than is abstract knowledge" (Epstein, 1994, 709, 711). The rational processing system is analytic, logical, and deliberative and encodes reality in abstract symbols, words and numbers. In contrast, the experiential system is holistic, affective and intuitive and encodes reality in concrete images, metaphors and narratives linked in associative networks. Therefore, besides knowing the availability and content of information and messages about sustainability and environmental problems, we also have to examine how sustainability issues should be communicated to encourage more sustainable lifestyles.

The role of lifestyles in consumption, especially in the field of energy consumption and waste disposal, has been examined in several studies over the last decade, but not in such a complex area as sustainability. However, most of these studies either focus on the impact of socio-economic characteristics (e.g. age, household size and income on the different aspects of household energy use) without providing a focused or more in-depth analysis of specific socio-demographic groups (or groups with specific media content consumption) or they analyse the role of attitudes and lifestyles but limit themselves to some selected consumption patterns.

Most studies so far investigated representative population samples – with the opportunity to draw general conclusions but not to identify and analyse in depth particular target groups (Reisch, 2009), who may play an important role in the move towards more sustainable consumption patterns. The research presented here aims at bridging this gap by analysing a specific target group in-depth, namely youngsters, by focusing on their media consumption and other factors including personal attitudes and behaviour, value orientation and individual

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socio-economic data of the selected interviewees. The present research also tries to develop a deeper understanding of the challenges in communicating and encouraging sustainable lifestyles and issues and uncover how sustainability perceptions and behaviour are guided by emotions and affects. It will also investigate the role and impact of web2.0 media formats and contents in issue involvement through entertainment education[1], salience (personal relevance) and efficacy (ability to act) as well as the interplay of values, normative assumptions about a desirable sustainable future and lifestyle. The research involves empirical studies carried out in Hungary, where – as indicated in the next section –, there are clear tensions between pro-environmental attitudes and the emerging consumer culture.

After presenting the main research aims and objectives a review of relevant literature will be presented, followed by the introduction of the theoretical background and methodological approach and the limitations of the research.

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[1] Entertainment education is defined here as "the process of purposely designing and implementing a media message to both entertain and educate, in order to increase audience members` knowledge about an educational issue" (Singhal and Rogers, 2004. p.5)

1.2 Geographic focus – Hungary

In recent years, sustainable consumption and production have been integrated into public policies in Hungary, as sustainable consumption became part of the National Development Plan and its Environmental Operative Program. The National Environmental Protection Program for 2003-2008 and 2011-2013 incorporated the promotion of sustainable lifestyles among its goals. In 2004, the Ministry for Environment and Water Management announced its six focus areas which also included future-friendly production and consumption.

According to a study by Gulyás et al. (2006), Hungary is on the same sustainability level as some well-developed EU member states, due to a lower level of development and consumption and the survival of certain traditional consumer and lifestyle models. However the trends regarding the volume, the structure and the related environmental damages of consumption are less favourable. Empirical evidence indicates that Hungarians may be concerned with the quality of nature and the environment for its own sake, without a clear link to the welfare of others, as Hungarians are concerned about the environment and have positive attitudes towards the environment. For example, the Eurobarometer survey (Hungarian Gallup Organization, 2003) reported growing interest in environmental matters in Hungary already in 2001; while in 2006, Hungarians attributed the most positive role to the EU in environmental protection out of all European countries (European Commission, 2006) and for 80% of Hungarians a product's impact on the environment is considered important (Gallup, 2009). Furthermore, Gulyas and colleagues (Gulyas et al., 2007) examined trends in the fields of mobility, food and housing in regard to (sustainable) household consumption. They found that Hungarians showed very positive attitudes towards the environment, were open to more sustainable alternatives, and were aware of the negative consequences for the environment caused by consumption.

Due to the above contradictions and the rapid changes experienced in consumer practices and lifestyles after the political changes in Hungary – and in many other post-communist countries – , Hungary is a good candidate for detailed empirical study. Thus far, similar study has not been conducted in a post-socialist country, such as Hungary, that may be regarded as a different culture compared with other Western European countries (de Groot et al., 2012).

1.3 Research aims and objectives

'Instead of viewing these consumers as part of the problem, they
should be persuaded to contribute to the solution'
Munasinghe, M (2010)

1.3.1 Statement of main objectives and innovative quality of the research

The current research aims to investigate the capacity of new forms of environmental and sustainability communication involving emotional appeal and entertainment to positively influence consumer behaviour (in particular young people within the so-called "hard-to-reach" segment of consumers) towards sustainable lifestyles.

Consumers' motivation, knowledge and attitudes towards pro-environmental consumption practices and sustainable lifestyles will be explored with surveys, focus groups and envisioning workshops about a desirable sustainable future and lifestyles, while the potentials of the ecotainment/sustainment concept – a social marketing concept based on positive emotions and entertainment features – in sustainability communication will be measured and analysed through its use in visual media and web 2.0 formats.

The target groups are Hungarian young people who are less interested in sustainability issues or consumer responsibility towards sustainability (e.g. the Y and Z generations – people born between 1982–1999 and from 2000, a generation that has often been described as hedonists and less – or not at all – interested in sustainability issues, see footnote).[2] At the same time, members of this generation (as they will serve as role models for future generations with their

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[2] In case of the Hungarian population, more than 50% of consumers are not interested at all in the environment and environmental protection (Hungarian Readership Analysis, 2011). This is especially true for consumers of medium and low socioeconomic status and the younger generations or youth. For the purposes of this research, I predominantly refer to young people aged 16-25 who might also be described as 'youngsters', 'youth' or 'adolescents'. The findings of the research also have relevance for young people/adults in their twenties and early thirties.

behaviour and consumption patterns) can serve as change agents and key players in empowering people to make radical changes in their lives (Fien et al., 2008).

Connected to these issue areas, the following research sub-questions were formulated:

Objective 1: Study the values, needs and worldviews around a desirable sustainable future of young people and understand current conceptions of a sustainable future among young people and the (baseline) importance of sustainability for them.

Research questions related to objective 1:

- What attitudes and values guide youngsters and characterize their lifestyles?
- How do youngsters envision sustainable lifestyles in 2030 in Hungary and on a global scale? What does a sustainable lifestyle mean and how does it connect to wellbeing and a good quality of life?
- What are the needs, values, imageries and worldviews framing the vision of a sustainable future among the target group?

Objective 2: Critically analyse the nature of contemporary sustainability communication messages of entertainment education, future visions of a sustainable life and the `ecotainment/sustainment` (Lichtl 1999, Reisch 2009) concept in selected visual communication material and web 2.0 formats and social media[3] aimed specifically at hard-to-reach consumers.

Research questions related to objective 2:

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[3] social media can be defined as the ''group of Internet-based applications that build on the ideological foundations of Web 2.0, and that allow the creation and exchange of usergenerated content'' (Kaplan & Haenlein, 2010, 61).

- How are sustainable lifestyles and practices presented by the visual and social media to effect behavioural change towards sustainable consumption for low-interest consumers?

- How should sustainable lifestyles and practices be presented by the visual and social media to effect behavioural change towards sustainable consumption for low-interest consumers?

Objective 3: Identify factors influencing failure and success for intentions of behaviour change of contemporary sustainability communication messages (via analysis of selected visual materials and web 2.0 formats and how they work in practice), and draw conclusions about the potential of new forms of environmental communication to achieve a conscious altering of consumer behaviour towards sustainable consumption.

Research questions related to objective 3:

- How can viewers of specific entertainment-education programs be influenced both affectively and cognitively toward sustainability? What are the mechanisms of visual communication responsible for new patterns of sustainable behaviour?

- What is the role of emotions in sustainability communication and what kind of emotions (positive versus negative) increase issue involvement?

Objective 2 and 3 are closely intertwined with a stronger overall focus on objective 3 compared to objective 2, where the second question of objective 2 will fully be answered after the 3rd objective is answered as well.

Based on the findings of the proposed research, the contribution of social, media, group, and individual factors to behaviour change will be evaluated.

1.4 Expected outcomes and contribution

Theoretical:

The research is expected to contribute to our understanding of

- how affective components influence behavioural intentions in the context of behaviour change towards sustainability,
- the role of emotions and their influence in persuasion processes,
- the potentials of social media in empowering youth towards adopting sustainable practices,
- the factors that help the communication of sustainable lifestyles.

Practical:

The research is expected to provide practical recommendations on

- how barriers can be removed and motivating factors be utilized in environmental sustainability communication,
- learning points for intervention programs in sustainability education and communication (targeting so-called hard-to-reach consumer groups, such as youth) in order to achieve behaviour change.

According to current research trends and needs identified over the past decade, the identification of the underlying psychological factors and barriers, especially the role of affect, imagery and social media, in triggering pro-environmental behaviour and their role in encouraging change in current lifestyles is hitherto empirically understudied and very few studies exist, especially in former socialist countries. The geographical scope of the research is Hungary (as there are clear tensions there between pro-environmental attitudes and the

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emerging consumer culture, and generally low awareness of and action towards sustainability) but the research aims to provide insights applicable at the international level.

Based on the results, the identification of factors influencing failure and success of sustainability communications is envisioned and conclusions will be drawn about the potential of new forms of environmental communication to achieve a conscious altering of consumer behaviour towards sustainable consumption. The results should both contribute to the understanding of factors influencing pro-environmental consumer behaviour and deliver recommendations for policy programs targeting youth.

1.5   *Structure of the thesis*

The thesis is structured in 8 chapters.

Chapter 1 is an introduction to and outline of the dissertation. It describes the rationale of the study, the research aim, objectives and research questions, as well as the context of the research and expected outcomes and contribution both on the theoretical and practical level. The overarching research question concerns the potential of new communication approaches for sustainable lifestyles among young people.

In chapter 2 theoretical literature relevant to the study is analysed. It analyses the concepts and strategies around sustainable consumption, the communication of sustainability and the associated challenges. The section also explores the trends in current lifestyles, sustainable consumption and production mainly on the European scale and in Hungary by analysing the key trends and conflicts in three domains that contribute the most to environmental problems arising from consumption and current lifestyles: food, mobility and housing. As the target group of the research consist of young people, their role in sustainable consumption and their consumption patterns are introduced. As a concluding part of the chapter, the analytical framework, the sustainment approach for sustainability communication as well as behaviour change approaches are analysed.

Chapter 3 presents the methodological approach of the research. If first introduces the methodological approach of the research, followed by the description of data collection, then describes data analysis for the research. The research design applied a mixed-method approach and included questionnaires, focus groups and envisioning workshops for data collection and utilized content analysis, statistical analysis and social network analysis. As for

each objective of the research a distinct method was applied, a detailed description of the specific methods used in the thesis are to be found in the respective chapters.

Chapter 4 explores the meaning of sustainability and sustainable futures among young people via envisioning workshops and provides insights toward questions 2 and 3 of objective one, namely young peoples' visions, imageries and worldviews around a sustainable future. It intends to help understand current conceptions of sustainability, describes the visions of youngsters about and around a sustainable world carried out as a form of participatory scenario building exercise. The results of the envisioning workshops also provided the basis for the selection of visuals for the analysis of current sustainability communication.

Chapter 5 aims to respond to questions of objective 1 on the study of the values, needs and worldviews around a desirable sustainable future of young people and understand current conceptions of a sustainable future among young people and the (baseline) importance of sustainability for them. This section of the research aims to validate and adapt the German postmaterialism scale for Hungary in order to measure consumers' propensity to socially and environmentally conscious consumption and study their values. It also explores the lifestyles, values, attitudes, behaviour and understanding of sustainability of young people in Hungary with the help of questionnaires and focus group discussions.

Chapter 6 evaluates 19 selected visual materials that aim to communicate different aspects of sustainability in various format and styles, mainly based on their affective component and emotional effects on viewers. The chapter investigates the questions covered by objective 2 about how sustainable lifestyles and practices are and should be presented in the visual media by analysing the selected material. It aims to provide insights toward objective 3 on the factors influencing viewers both affectively and cognitively on sustainability by focusing on visual material.

Chapter 7 describes an exploratory research of a selected lifestyle oriented social media site by utilizing the combined research of netnography and network analysis with the aim to analyse whether and to what extent certain social media sites are able to stimulate small behaviour changes. This section provides insights toward objective 2 and 3 as well but by focusing on a selected social media site targeting young consumers.

Chapter 8 concludes with discussion and summarises the main results of the thesis. It identifies factors influencing failure and success of behaviour change processes in relation to contemporary sustainability communication messages via selected visual materials and web 2.0 formats and draw conclusions about the potential of new forms of environmental communication to achieve consumer behaviour changes towards sustainable consumption. The chapter also describes the limitations of the study and provides avenues for further research.

2 Literature review and theoretical framework –

The challenges of current lifestyles and moving consumers towards sustainability: the role of communication toward achieving this goal

As this thesis examines issues of sustainability in relation to consumption and current lifestyles, the literature review starts first with a discussion on current concepts, strategies and trends in sustainable consumption. It takes a closer look at those domains of consumption that have a major role and significant impact both on the current and future state of the environment and our society, namely food, mobility and housing. Based on that, it justifies the need for this study by highlighting the challenges and problems of unsustainability caused by current consumption patterns. At the same time, these also express the necessity of an improved or different form of communication of sustainability. The review of normative visionary scenarios - as the thesis examines the youth's visions, associations and imageries of a sustainable future – provides the background to the use of envisioning workshops for the research and their use for behaviour change interventions. This section of the research will also review and explain the various theories and models of behaviour change (drawn from environmental psychology, sociology, and social psychology) to better understand the factors that influence human behaviour.

2.1 Concepts, strategies and trends in sustainable consumption

All environmental problems are directly or indirectly linked to consumption, demanding changes in today's consumer behaviour and lifestyles (EEA, 2010). This demand comprises a multi-stage and multi-level process, from the determination of needs, purchasing products and services and using them to disposal as well as "co-production and self-production in households and social networks" (Reisch and Bietz, 2011, p. 142). The negative consequences of material consumption – characterized by overconsumption of industrialized countries and

growing consumption levels of the post-socialist countries – on the environment and society was first highlighted in 1972 in the report Limits to Growth (Meadows and Meadows, 1972) of the Club of Rome. It was first put on the agenda at the World Commission on Environment and Development (WCED, 1987) and during the Rio Earth Summit in 1992, followed by the Johannesburg Summit in 2002 and the Marrakech Process including the 10-Year Framework Programme, resulting in various global and regional initiatives. The European Council identified sustainable consumption and production as one of the seven key priorities for the EU in its new EU Sustainable Development Strategy, revised in 2006 with the proposal for an Action Plan in 2008.

Sustainable consumption and production gained significant attention both on the international and national policy agenda and in research with the emphasis to achieve major changes in existing consumption patterns and lifestyles in order to secure human development in the future and find solutions for global environmental and social problems. Although there is no widely accepted meta-theory (Reisch, 2001) and no clear agreement on the meaning (Jackson, 2005) the original term 'sustainable consumption' stems from the Oslo declaration, as 'the use of goods and services that respond to basic needs and bring a better quality of life, while minimising the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardise the needs of future generations' (Norwegian Ministry of Environment, 1995).

Currently, it is a concept with competing discourses (Hobson, 2006) with differing views on whether and to what extent it calls for consuming more efficiently, consuming differently or consuming less (Jackson, 2006). The discourse around sustainable consumption calls for a deeper understanding of current lifestyles, the drivers of current consumption patterns, behaviours and the satisfaction of our needs, habits, routines and consumer decision-making (Jackson 2005, Shove 2003, Reisch 2009). According to Spaargaren, the "lifestyle of each

individual is constructed from a series of building blocks – corresponding to the set of social practices an individual invokes when pursuing his or her everyday life" (2003, p. 689). In order to provide greater relation to the everyday life of individuals, by now sustainable consumption has been re-defined as 'sustainable lifestyles' (UNEP, 2010). Sustainable lifestyles refer to a broader set of activities including interpersonal relationships, leisure activities, education, sports and material consumption (from the purchase and use of products to the interaction of and dealing with needs and their satisfaction, Reisch 2001) as well (Mont 2007). The reason why concentration on reduction potentials merely from the production side is not sufficient can be found for example in the case of consumer durables where up to 80% of environmental pollution falls back on the use phase (CSCP and UNEP DTIE, 2007) highlighting the need to reduce the environmental impact of the use phase and provide help for consumers on how to achieve this (e.g. via communication and education intervention programmes as highlighted during the UN Decade of Education on Sustainable Development). The use phase of the following fields of consumption has a major role for sustainable consumption (see Figure 1): housing, food, mobility and leisure, information and communication, clothing and washing (EEA 2005).

In Western Europe, 20-25% of the obesity found in men, and 40-50% in women can be attributed to differences in socio-economic status.

In EU-27, approximately 60% of adults and over 20% of school-age children are overweight or obese.

Average household size in Europe has decreased from 2.8 to 2.4 people.

Meat imports to the EU 15 increased by 120% between 1990 and 2007.

Car ownership in the EU-27 increased by 35% in the period 1990–2007.

Heating accounts for 67% of household energy consumption in the EU-27.

Average car speed in big cities is 15 km/h because of congestion.

Electricity consumption per person increased by more than 30 % between 1990 and 2007.

Food, mobility and housing account for 75% of household environmental impact.

The building sector is responsible for 40% of EU energy consumption and 36% of total CO2 emissions.

Waste generation increased by 2% between 1996 and 2004 in EU-15.

Figure 1: Examples of unsustainable consumption in Europe (Backhaus et al. 2012)

As goods and services are intended to meet consumer demands, the purchasing and use habits, practices and lifestyles of individuals are seen as the cause for a significant part of environmental pollution and degrations, arising from the consumption-production relationship. Strategies for achieving sustainable development can be divided into three different groups: efficiency, sufficiency (Huber, 2000, Hicks and Kuhndt, 2013) and consistency strategies and lifestyles:

- **Efficiency strategies** are mainly referred to the industry and business, meaning the optimisation of the consumption of material, energy and other resources per output unit through technological development (e.g. the introduction of environmental management systems). As a result, besides labour and capital productivity, resource productivity is increasing as well. Through this process household consumption can also be influenced: for instance with the development and consumption of products

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with a longer lifetime the material consumption of households can decrease as well. Here, consumers are required to pay attention to the use efficiency of products (Reisch, 1999). Growth effects or rebound effects[4] (over)compensate in some cases the benefits of efficiency strategies (Huber, 1995). In the current economic system the efficiency strategy still enjoys prevalence, but its full realisation can only be achieved if it is complemented by cultural and social changes (Reisch and Bietz, 2011). In case of consumer and households, efficient lifestyles aim to waste less and use more efficient products and services often resulting in cost savings. According to the 2011 Eurobarometer (EC, 2011) consumers in the EU-27 achieved significant savings in energy and water consumption mainly through improvements in heating, the use of energy efficient appliances, insulation and the use of renewable energy sources.

- **Consistency strategies** emphasize the shortcomings of efficiency strategies. Hereby are rather the qualitative than quantitative aspects of the environment in focus with the focus on production methods with less harm on the environment (e.g. energy from renewable energy, compostable products etc.): "a strategy of qualitative change of the industrial metabolism by modernizing the basic structures of technology and products, allowing for a permanent turnover of material flows on a large scale and in large volumes" (Huber, 2000). On the individual level and consumption side, different lifestyles belong to this category by representing a major shift in relation to the use and ownership of goods and services (Hicks and Kuhndt, 2013). Good examples in this group are mobility management systems and shifting to other modes of consumption (e.g. exchange, share, reuse, rent, lease), and alternative product service systems (Hicks and Kuhndt, 2013; Botsman and Rogers, 2010).

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[4] The rebound effect refers to an increase in consumption caused unintendedly by the introduction of a specific policy or intervention with the aim to improve environmental efficiency. The environmental benefits might by either at a lower level than anticipated (rebound) or negative (backfire) (Hertwich, 2005, Maxwell et. al. 2011)

- **Sufficiency strategies** (Daly 1996, Princen 2003, 2005) and **sufficient lifestyles** (Hicks and Kuhndt, 2013) are aiming to change lifestyles that should curb (over)compensation effects and affluent consumption patterns and improve quality of life. Thereby, they are often linked to changes in need determination since sufficiency means the self-limitation of material needs and consumption or the decision not to consume. Alternatives are for instance the substitution of products through services, or collective use of different products, self-production or secondary market supply or collaborative consumption (Reisch 1999, Botsman and Rogers, 2010). Hereby it becomes obvious that in contrast to technological innovation in the frame of the efficiency strategy, social innovation stands in the foreground. "…interventions aimed at reducing consumption will be most effective if they bring about higher-level changes in the socio-economic-cognitive system — i.e., by changing cultural values or worldviews" (Brown and Cameron, 2000, p.34). Examples for sufficient lifestyles are the 'Voluntary Simplicity', the 'Slow Living' movement or the 'Buy Nothing Day' campaign on the individual level and some on the community levels such as the 'Transition Towns' (e.g. 'Wekerle in Transition' in Hungary) or other social innovations like new community currency schemes (e.g. time banks, local currencies). While both efficiency and consistency strategies aim to satisfy existing needs in a more environmentally friendly way, sufficiency proposes a new model of wealth or well-being.

The new agenda of sustainable consumption calls for a clearer understanding of the underlying social and psychological factors of consumer behaviour, human choices and needs in order to accompany the efficiency revolution (as the efficiency strategy is often criticised that the increase in efficiency is often offset by the rebound effect) in sustainable production with a sufficiency revolution (meaning the reduction of needs and consumption) on the side of sustainable consumption.

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While neoclassical economics suggest that with increasing consumption we can improve our well-being and promotes a material and growth-based concept of well-being, others argue that current levels and patterns of consumption are damaging not only environmentally, but psychologically as well and curbing consumption might even result in a "double dividend" (Spaargaren, 1997) meaning that we could live better and with less environmental burden by consuming less.

The question still remains how it could be achieved to make sustainable consumption patterns attractive to a large number of consumers in the current growth-oriented and materialistic structure. Defra (2011) undertook an extensive review drawing on evidence from research and academic sources on understanding and influencing behaviour – and identified four key areas in achieving lifestyle changes: What others are doing is key; Skills and ability are more important than understanding; 'What is in it for me' is important; For many „it just makes sense" to act, though making a difference matters.

For such changes consumers have to be willing to adopt and accept the alternative of reduced levels and changed patterns and structures of consumption. These are often perceived by consumers as opposite to current values, habits and traditions, unappealing and demanding, as well as various costs for individuals such as reduced comfort or financial and time efforts. These costs and efforts have to be done by the acting individual whereas all benefits resulting from behaviour change will be externalized to the society as a whole with conflict between short-term individual and long-term societal interests, costs and benefits (Kals and Maes 2002). As Blewitt notes "all learning really becomes meaningful when there is some resonance with the everyday life of the learner" (Blewitt, 2006, p. 10).

2.2 Normative scenarios and envisioning workshops as tools for initiating behaviour change

In this study, in order to understand current conceptions and visions of youth about sustainability, participatory scenario-building exercises - so called envisioning workshops - were employed. Scenario development evolved as a strategy tool originally applied in military planning, developed by Herman Kahn and his colleagues at the RAND Corporation (van der Heijden et al., 2002). The first generation of scenarios, developed in 1950s, were mainly statistical predictions (Slaughter, 2005). In the 1970s, a second wave of scenarios began to receive attention by corporate planners at Shell and General Electric who noted the deficiencies of forecasts as these often proved to be incorrect especially in the long run. Another well-known example of scenarios in the second wave is the Limits to Growth report to the Club of Rome in 1972. In the 1980s, a new, third generation of scenarios were developed in the context of sustainability challenges. These recognized the need for societal and structural changes, a transition in order to find the way to a more sustainable future as well as new methods for explorations of the future (Sondeijker, 2009).

There are various definitions of scenarios and scenario development but there is a general agreement that scenarios are not predictions or projections (Rotmans et al., 2000, van Notten et al., 2003). Scenarios rather describe alternative images of the future with the assumption that future developments are unpredictable and stress the need to take uncertainty into account in decision making. Van Notten (2005, p.2) proposes a definition that covers most aspects of the various approaches around the definition of scenarios:

"Scenarios are consistent and coherent descriptions of alternative hypothetical futures that reflect different perspectives on past, present, and future developments, which can serve as a basis for action".

There are several typologies of scenario characteristics available (e.g. Borjeson et al,. 2005, Dreborg, 2004, Slaughter, 1988, Tapio & Hietanen, 2002, van Notten, 2003). Borjeson and colleagues (2005) developed a typology proposing three general types of scenario approaches: predictive, explorative and normative:

1.   Projections with predictive scenarios answer the "What will happen" question. These forecasts and "what-if" scenarios are predominantly quantitative and are hence challenged by uncertainty in the long term.

2.   Exploratory scenarios answer the "What can happen" question. They are typically qualitative and aim to explore plausible futures and develop a set of scenarios on a long time horizon in order to allow structural changes. Exploratory scenarios can be divided into external and strategic scenarios: External scenarios focus on factors that cannot be controlled by the actors. In case of strategic scenarios, policies are included and tested, aiming to describe possible outcomes of strategic decisions.

3.   Normative scenarios answer the question: "How can a specific target be reached?" There are two types: In preserving scenarios the targets can be reached without transformation in an efficient way; they mainly work with optimising modelling or in qualitative way. If structural changes are needed in the system, transforming scenarios have to be used, such as "backcasting"; these typically result in a number of images or visions of the future illustrating how specific outcomes or a certain target can be reached. These visions are usually aspirational.

Figure 2: Typologies of scenarios. Source: Borjeson et al. (2005).

Contemporary scenario development and techniques are used in a wide range of contexts, in different organisational settings from corporate planning to public policy assessment. As scenario development is applied to respond to different challenges and developments, the methods and techniques used vary according to the nature of change addressed (for a detailed review see Bishop et al., 2009).

Scenarios are increasingly used to respond to and influence development (Sondeijker, 2009), to discover uncertainties, to prepare for unexpected changes and to "highlight crucial decisions that should be taken today" (Mutombo & Bauler, 2009, p.1.).

As regards methodological approaches of scenario development, the literature distinguishes between desk research, model-based and participatory approaches (van Notten et al., 2005). Participatory methods mainly work with stakeholder workshops, focus groups, citizens' juries and envisioning workshops to reach specific aims: Through public, expert and stakeholder participation, scenarios and visions can broaden the perspective, information can be collected from a wide range of disciplines and can be both challenged and integrated (Rotmans, 1998) linking scientific knowledge and political decision-making (Millennium Ecosystem Assessment, 2005). Moreover – and of increasing political importance – public and/or expert involvement in scenario formulation and evaluation can increase legitimacy and acceptance of visions and political decisions among participants and beyond (Quist, 2009).

Descriptive	**Forecasts** use formal quantitative extrapolation and modelling to predict 'likely' futures from current trends.
	Exploratory Scenarios explore possible futures. They emphasise drivers, and do not specify a predetermined desirable end state towards which storylines must progress.
	Technical Scenarios explore possible future technological systems based on hydrogen. They emphasise the technical feasibility and implications of different options, rather than exploring how different futures might unfold.
Normative	**Visions** are elaborations of a desirable and (more or less) plausible future. They emphasise the benefits of hydrogen, rather than the pathways through which a hydrogen future might be achieved.
	Backcasts and **pathways** start by defining a desirable and plausible future end point. They then investigate possible pathways to that point.
	Roadmaps describe a sequence of measures designed to bring about a desirable future. Studies from the previous five groups, or elements of these groups, sometimes form the basis for the identification of specific measures.

Table 1. Approaches of future studies. Adapted from McDowall & Eames (2004)

Normative studies (such as visions, roadmaps and backcasting) aim to elaborate desired futures and develop possible pathways towards these visions. They define visions as "elaborations – usually narrative accounts - of a desirable/sustainable future. They describe a (more or less) plausible end state rather than the pathways through which that future might be achieved".

In the current research, participatory scenario-building – so-called envisioning exercises – workshops were used to understand current conceptions of sustainability and describe the visions of young people about and around a sustainable world. Their results aim to give answers to objective 1 and its related research questions.

2.3 Role of youth for sustainability

Looking at the lifestyles of the youth can tell us a lot about the changes of social life[5]. These changes give insights about failures and successes of the current system and important drivers and barriers of transforming the current system towards sustainability. As Melucci pointed out (1992, p. 52):

> "Young people are the primary subjects of dramatic transformations that affect contemporary society and experience them most directly. Parents, teachers, and adults can learn about themselves by listening to youngsters."

Today, we face a wide variety of definitions for young people, such as youngsters, teenagers, youth, young adults, and young adolescents or as the X, Y or Z generation. On the international level a wide range of age groupings is used when defining young people, very often referred to those aged between 18-35 years as a life period of major lifestyle changes. The age group of 16 to 35 years is characterized by attending high-school, higher education or early career life. Within this age group many live with their parents and family, while others have started their independent life or their own new family. For this research, it is important to clearly separate age categories, as it has clearly different characteristics in the consumer socialization process. For the purposes of this research, I predominantly refer to young people aged 16-25 who might also be described as youngsters or youth.

Youngsters are seen today by some as the source for rapid, fundamental changes, coming from people 'not socialized to the status quo'. These young people are (expected to be) geared to make radical changes and have new perspectives that are sought and required to give answer to the challenges of sustainability, are considered to have the potential of being key

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[5] Generational perspectives discussed in this research refer to those rooted in Western worldviews and models.

agents of change and act as a catalyst for more sustainable consumption patterns (Hume, 2010). They do not only need to go against the thinking "this is the way we have always done it" but they feel the need to mainstream it. At the same time, both in research reports, newspaper articles or on the the internet, the Y or Millennial generation is often called the "The Worst, Most Entitled, Most Spoiled Generation in the History of Humankind?" or as "The Dumbest Generation" and "Slouching Toward Adulthood" (Twenge et al., 2013).

With the experience of cultural changes and the sociocultural environment of different time periods, the youngest generation is socialized with different values compared to older generations (Twenge et al., 2012). Based on Twenge et al.'s classification, we can distinguish between the views on Millennials/Generation Y of "Generation We" (more community oriented, involved in civic matters, caring and interested in environmental protection, having less concern for others), the "Generation Me" view (more extrinsic, materialistic, less concerned about the environment and others) and the "no change" (no generational differences) view. A recent study investigated generational trends and differences at age 18 between Baby boomers (born 1943–1961), Generation X (1961–1981) and Millennials/Generation Y (1982–1999) (Twenge et al., 2013) in the US. The study compared changes among the three generations in trends in civic orientation and social capital, and differences in life goals, concern for others, intrinsic and extrinsic values and their relationship. Based on their findings – in contrast to a popular view – the Millennial generation is not more caring, community oriented or active politically than older generations and their interest towards protecting the environment is lower. On the other hand they are more engaged and active in volunteering and involved in community activities (especially at school).

The current research focuses on the role of young people to help their motivation to behave in a more sustainable way. The reason for focusing on the Y generation is first their particular

role and place in European policy making (European Commission, SEC(2010) 1564) as one of the most vulnerable groups of society – due to increasing youth unemployment rates and increasing child and youth poverty – and at the same time their potential for innovations and to serve as catalysts for leading the transition towards sustainable lifestyles. They can serve as change agents and key players in empowering people to make radical changes in their lives (Fien et al., 2008). The consumption patterns of the younger generation is predicted to have a higher burden on the environment than we have currently, the generation of young people is considered as the most consumption oriented (Sullivan and Heitmeyer, 2008). Consumers aged between 16 and 25 years (the target group of the current research) are the most open to changes among all generations and likely to change consumer behaviour (Pew Research Center, 2010). The life phase of adolescence, when habits and lifestyles are formed and maintained has an immense role in driving cultural change (Watts and Flanagan, 2007). Therefore, it is of high importance to understand what characterizes the youth and what interventions might be needed to guide their behaviour (that will be investigated through the envisioning workshops). What do youngsters understand under sustainability?

Several reports and studies found a strong relationship between the self-esteem and identity of youngsters and the influence of consumer culture (Osgerby, 1998, Kjeldgaard and Askegaard, 2006, Wilska, 2002). Social media, the online world and digital media are increasingly embedded in everyday life across Europe (Livingstone and Haddon, 2009); offering places for participation and social interaction from a very young age (Boyd, 2008, Livingstone, 2011). If we look at the data on Facebook's use collected by gemius/Ipsos Audience (the regular monthly currency measurement for online media in Hungary), according to audience composition metric the young target groups cover appr. 15% of Facebook's total user base with almost 20% share in pageviews (we call a new pageview whenever content is changed as a result of user activity). It means that this target group is a heavy user, i.e. using Facebook in a more intense way than the average.

Target group	Period	Monthly users	Average daily users	Average Time spent / month/ user	Reach%	Audience composition	Pageview composition
15-20yo.	08.2009	86 820	18 554	03:36:11	14,20%	11,60%	-
	08.2010	510 899	248 268	12:40:54	76,11%	20,68%	31,79%
	08.2011	496 959	236 969	21:53:04	78,85%	13,81%	15,50%
	08.2012	609 373	340 880	11:38:53	94,65%	15,37%	12,74%
	08.2013	474 471	213 490	08:26:09	91,93%	11,68%	9,12%
21-25yo.	08.2009	209 904	45 103	01:56:32	39,49%	28,05%	-
	08.2010	345 689	162 368	07:19:15	68,26%	13,99%	19,40%
	08.2011	646 886	354 222	14:27:09	93,61%	17,98%	22,00%
	08.2012	614 309	358 395	10:47:45	91,76%	15,49%	19,20%
	08.2013	512 507	284 234	07:34:02	90,59%	12,62%	8,97%

Table 2: Facebook usage of Hungarian youngsters in 2013. Source: Ipsos SA - Gemius SA: gemius/Ipsos Audience, 2013.

According to Ipsos' study on multiscreen usage youngsters are using Facebook in a much more intense way than the average population. 72% of people aged 18-25 are using Facebook at least weekly, while this share was 50% for other target groups. Sharing life events, photos or other content is also much more widespread in the young target group; almost two-third of them is doing it weekly. Reflecting on other people's shared information and content by liking or commenting is also extremely popular besides sharing "own stories".

2.4 Communicating sustainability, sustainable consumption, and the role of emotions

Today, the mass media and the Internet are playing a key role in the industrialized world not only in disseminating information very rapidly but also in shaping and influencing recipients' opinions, habits and actions, as well as in setting the public agenda for discourse (McCombs and Shaw 1972) and the way issues are framed (second-level agenda-setting) (Weaver et al., 2004). Media content has a high potential to influence our view of lifestyles, our attitudes, our opinions, values and norms. An especially significant role is played by advertising in our consumption patterns, but the media, and more concretely the mass media are generally criticized not only for being the vehicle for overconsumption but also for causing cultural decline (e.g. Baudrillard, 1998) and becoming part of mainstream thought and culture through the symbols and value statements transmitted to their audiences. Institutions of the mass media are trying to reach their key audiences according to their viewers' interests, attitudes and time preferences with specialized channels and programs.

According to studies (e.g. Newbold et al., 2002) describing the role of the media in shaping consumption patterns we can summarize it as follows:

1. providing information about goods and services, prices, market conditions, the behaviour of other consumers, and other factors that might influence consumption choices

2. creating or reinforcing perceptions of needs (e.g. for comfort, cleanliness, convenience), encouraging their audiences to associate values or ethics with particular consumption patterns

3. providing audiences with a virtual community in which particular consumption patterns are linked to social status or membership of social groups

4. providing a cultural or symbolic environment in which audiences learn cultural values, ethics, worldviews and cultural norms

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5. contributing to the discourse on consumption, the environment and social issues.

During the last decades, coverage of environmental issues focused mainly on disasters and pollution incidents, rather than on the underlying social and economic problems (SustainAbility, 2002, Boykoff and Roberts, 2007, Anderson, 2014). As the risks and negative consequences of environmental problems are not always observable on the individual level, people distance themselves from the issues psychologically (Lorenzoni and Pidgeon, 2005). In order to make environmental and sustainability related news interesting, media coverage has to be new and create attention. Therefore, sensationalism, catastrophes, shocking visuals, "fear and threat" narratives have been predominant in communicating risks of environmental pollution and climate change (Carvahlo and Burges, 2005, Reisch et al., 2008). These fear evoking approaches can further increase people's feeling of being hopeless and powerless, not being able to make any difference with changing ones' behaviour (Whitmarsh et al., 2013) as ones' action would be just a 'drop in the bucket'. Risk perception is heavily influenced by affective components (Epstein, 1994) and the fear-appeal tries to guide behaviour and elicit behaviour change through communicating danger on the community or individual level. Based on empirial findings, while fear appeals make individuals aware of problems, without messages of efficacy, fear evoking communication is liable to remain unsuccessful as it causes the feeling of being powerless and helpless (Boykoff and Roberts, 2007, O'Neil and Nicholson-Cole, 2009). As a consequence, the (sole use of) fear-and-threat approaches can be considered as counterproductive, leading to decreased engagement levels from the public and reduced levels of risk perception (Whitmarsh et al., 2013).

Consumer socialization is a life-long learning process by which consumers develop consumer-related skills, knowledge and attitudes regarding their current and future consumption patterns (Ward, 1974) and integrate themselves as consumers into society. An especially important form of this social learning process is observation, since behaviour can be "directly observed,

transmitted visually over mass media, verbally described, or simply existing in the imagination" (Secord and Backman, 1976). The media have a significant role in shaping identities, values, aspirations and lifestyles as well as a deep influence on consumption patterns. Mass media are seen as the most important source of information in modern societies (Luhmann, 2000, Hansen, 2011). Surveys and opinion polls show that most people acquire their knowledge about environmental issues and climate change through the mass media – even with the profiliferation of new media – (Burgess, 1990, (Carvalho and Burgess, 2005, Anderson, 2011, Ryghaug et al., 2011), and as Howson and Cleasby (1996) also note the particular relevance of television and the visual media in the transition to more sustainable lifestyles and society by emphasizing "if sustainability is to capture the popular imagination and change orthodox perceptions and patterns of behaviour, most people around the world are likely to encounter it either through media, or else not at all" (p. 160). Through mediatization consumption became increasingly "image-loaded" and lifestyle oriented (Jansson, 2002). Mediatization can be described as a process through which "the maintenance and development of lifeworlds and the relationships between them are increasingly dependent on, and moulded by, media technologies, representations, and institutions" (Jansson and Andersson, 2012, p. 175). Schulz (2004) distinguishes four aspects of mediatization: ´extension´ of human communicative action, ´substitution 'of social activities and social institutions (to varying degress), ´amalgamation´ of media-related and non-media related actions and activities in social life and ´accommodation´ where all actors of all sectors of society accommodate and are oriented to a ´media logic´ (p. 89).

Television (especially entertainment education and reality shows), internet and social media play an increasingly strong role (as celebrities are emulated as if they were high-status members of viewers' own communities), but the relative weights of different media have changed substantially, increasing for social media and internet and declining for television. TV viewers and social media consumers try to keep up with the high-consuming lifestyles

(Cohen et al., 2013, McClain, 2013) portrayed in primetime soap operas, reality shows, rather than with their own next-door neighbours. Studies find that status consumption is associated mostly with certain cultural subgroups that are consuming for public display and status (Danish Environment Agency, 2004). Direct media coverage of sustainability issues, and still more of the links between consumption and environmental degradation, is weak. At the same time, research reveals that sustainability induces positive images and people strive for a balance in sustainability and quality of life (Lorenzoni et al., 2007, Moser, 2009). According to Langley and van den Broek (2010), social media applications are increasingly used by businesses, non-governmental organisations and consumers to overcome the attitude-behaviour gap towards sustainability and are seen as the mark of consumer empowerment and education (Kozinets, 1999, Kozinets et al., 2012):

> "Empowered by information exchange and emboldened by relational interactions, consumers will use their online activities to actively judge consumption offerings, and increasingly resist what they see as misdirected … The existence of united groups of online consumers implies that power is shifting away from marketers and flowing to consumers. For while consumers are increasingly saying yes to the Internet, to electronic commerce and to online marketing efforts of many kinds, they are also using the medium to say 'no' to forms of marketing they find invasive or unethical. Virtual communities are becoming important arenas for organizing consumer resistance. A multitude of communities of consumption have been used for 'transformational' interaction aimed at increasing the betterment of the group of consumers as a community, very often by undermining the efforts of those who would profit at their expense." (Kozinets, 1999).

The efforts to make the vision of sustainability widely accepted and attractive – followed by behaviour changes – do not seem to be as successful as hoped (Reisch and Bietz, 2009). Many

findings of media and communication research are incorporated and used in the communication of sustainability and much is „state of the art". It is argued that messages should point to possible personal or consumer type specific benefits and motives (health, fitness, savings, convenience, wealth in time, social acceptance etc.) instead of communicating the "costs" of changing behaviour; they should represent realistic alternatives for everyday life, i.e. be easily understandable and realizable (Brickwedde and Peters, 2002).

Communication of sustainable development in the consumption fields of housing and mobility seems to be especially difficult: first of all, because individual mobility and owning a home are cultural symbols or symbolic goods and determine the social status of individuals (Reisch 2002), secondly, because the current infrastructural framework is often seen as a barrier that can only be overcome with significant prohibitive additional individual costs.

The timing of the messages plays an important role as well: it is difficult to change our behaviour, routines and habits in everyday life but there are some situations or "windows of opportunity" when individuals make fundamental changes in their life (such as getting married or divorced, having children, moving, or changing workplace) (Svane, 2002). In this view a more specific target group segmentation for communication and media use can be suggested.

Since consumers are facing increasingly complex circumstances while making their daily consumption decisions, the question of how the decision making process and choices are made by consumers is crucial in order to achieve sustainable behaviour. While the role of emotions has traditionally been neglected in sustainability or pro-environmental behaviour research – due to the dominance of rational choice-based action theories (such as Ajzen and Fishbein's Theory of Reasoned Action, 1980 or the Theory of Planned Behavior, Ajzen, 1991) which assume "restricted, resourceful, expecting, evaluating, maximizing man" (Coleman and Fararo, 1992) - during the last decade research interest has significantly grown

in the field of the role of emotions in consumer behaviour and decision making (e.g. Laros and Steenkamp, 2005) and the role of emotions is hardly debated anymore.

The rational choice view has been challenged by those researchers who argue that the rational choice theory is inadequate to describe consumers' decision-making processes in real-life situations. Their theory argues that human decisions are based on heuristics and stresses the limits of human information-processing (Bettman, Luce and Payne, 1998). Because of limited information-processing capacities, consumers rely on some heuristic principles, which enable them to reduce the complexity of problems (Bettman and Kakkar, 1977). Other studies, analysing the role of emotions for environmental behaviour found that motivation toward sustainable behaviour is supplemented by moral emotions (such as indignation about insufficient pollution control, anger about too much pollution control and feelings of guilt about insufficient sustainable behaviour) (Kals and Maes, 2002). According to Kals and Maes's study, there is a strong moral base for acting in a sustainable way that is "reflected not only cognitively, but also experienced emotionally. It is strengthened by the influence of the experience of nature resulting in love or emotional affinity towards it. Therefore, sustainability should not only be appraised cognitively but also as an internalized norm, which is interconnected with personal experiences and even feelings of love."

Triggering positive emotions and therefore influencing more pro-environmental consumer decision making is supported by the results of Isen (2001) whose study indicated that positive emotion leads people to be more socially responsible, take others' perspectives better into account, be more flexible, open and innovative, and show much better performance on tasks requiring complex problem-solving.

Media coverage of sustainable development has increased in recent years with a focus on consumer education by providing merely cognitive information and reasoning targeting consumers of higher educational and socio-economic status (Bouman, 1999). At the same

time, there is evidence for the discrepancy between attitude and behaviour (e.g. Whitmarsch et al., 2008) when the right values or attitudes do not necessarily translate into the right actions and behaviour, referred to as the "value-action gap" (Kollmus and Agyeman, 2002) or "attitude-behaviour gap". Traditionally, campaigns in the past focused on providing more information on environment and sustainability-related topics causing information overload, often leading to consumer confusion and passivity (Reisch, 2003). Despite the increasing number of new communication interventions in the past few years, an in-depth analysis of the limitations, the use and benefits of these are rather limited (Moser, 2010).

Framing of messages has a significant influence on how people perceive information as well as on the attitudes, knowledge, competence and behavioural intentions of the public (e.g. Gifford and Comeau, 2011, Morton et al., 2011, van de Velde et al., 2011, Pelletier and Sharp, 2008, Barr et al., 2011). To disseminate and make ecological themes attractive over a wide area is one of the most important and essential tasks of the mass media in environmental communication (Oxford Commission, 2004) and critical to the fulfilment of this function are the mode of presentation, the message, and persistence of the contents, moreover content and message should be related to real-life situations, locally relevant and engaging (O'Neill and Nicholson-Cole, 2009). It has to point to a specific problem and contain concrete, individual options with realistic goals, as well as so-called success stories. To overcome the more difficult obstacles to communication – such as prejudice, stereotypes, taboos, and antipathy, different educational background, social status, cultural and religious background, gender etc. – a new, tailor-made form of environmental and sustainability communications has become necessary (Reisch, 2009), guiding consumers through different stages of initiating behaviour change. Environmental communication strategies can be divided into three main groups. According to Lichtl (1999), these are three general forms:

1. Factual-Argumentative: argumentation, reasoning, logic, and rationality. This assumes 'a rational, intellectually engaged relationship between consumers and media messages',

2. Emotional-Argumentative: argumentative communication accompanied with emotional stylistic devices, activated by the emotional reaction of the recipient (such as strongly provocative/emotional pictures or associative words),

3. Ecotainment: messages are transmitted in an exclusively emotional way (by contrasting negative and positive feelings), foregoing argumentative communication but transimitting convincing cognitive messages.

It is argued that entertaining messages (accompanied by convincing cognitive messages) through the mass media can especially be appealing in case of those consumers who show a low interest in ecological or sustainability issues and media programmes, such as youth or the less educated (Reisch, 2011). Achieving behavioural change has until now been associated with only "sensitization, explanation, or consciousness formation." Research indicates, however, that the transmission of more factual information is not sufficient. "Based on modern cognitive theory, humans only act about 10% due to external information…. Almost 90% is inculcated through internal processes, such as feelings, motivation, values, and memories" (Block, 1996). Increased information provision alone does not help to overcome the attitude-behaviour gap and to translate attitudes to the desired behaviours (McKenzie-Mohr, 2000, Kennedy et al., 2009). These are again the result of individual life experience. In order for someone to begin moving toward modifying behaviour, he or she must consider resolving an ecological problem as a personal gain. Of course, individual gain can be understood very differently by different people. Behavioural changes touching on important cultural values and norms, ideals or social status, often cannot be achieved without incitement or even prohibition and can place the consumer in conflict between his or her existing environment, way of life, lifestyle, and the effort toward behavioural change leading to sustainable consumption.

Consumer behaviour can be understood as behaviour in relation to the way of dealing with the satisfaction of consumer needs. This behaviour is characterized by psychological and social factors, differentiated in behavioural research by cognitive and emotional behaviour patterns. The psychological determinants set themselves up with the combination of social, emotional and cognitive processes linked together. The social agents may be, in a wider sense, any influences of the environment, such as household and family members, peer groups, school and adult education, markets, cultural and sub-cultural factors, as well as mass communications, which exert an influence in establishing societal norms and customs and, from these, govern socialization influences (Kroeber-Riel and Weinberg, 1996).

Consumer socialization is a life-long learning process by which consumers develop consumer-related skills, knowledge and attitudes regarding their current and future consumption patterns (Ward, 1974, Moschis and Churchill, 1978) and integrate themselves as consumers into the society. An especially important form of this social learning process is observation, since behaviour can be "directly observed, transmitted visually over mass media, verbally described, or simply existing in the imagination" (Secord and Backman, 1976).

According to Meyer, Schützwohl and Reisenzein (1993), the relevance of emotions lies in the fact that they are central phenomena of our life. First of all, they are a phenomena experienced every day; secondly, they are connected to experiences that hold personal values. Giving answer to the question what an emotion is, we face a difficult situation. Although the research of emotions has become a central place in psychology, its definition still remains unclear. Definitions of emotions vary according to particular theories they are associated with and can be best understood within this theoretical context. However, a widely used definition of emotions was developed by Kleinginna and Kleinginna (1981, p. 355) who defined emotions as:

"… a complex set of interactions among subjective and objective factors, mediated by neural/hormonal systems, which can (a) give rise to affective experiences such as feelings of arousal, pleasure/displeasure; (b) generate cognitive processes such as emotionally relevant perceptual effects, appraisals, labelling processes; (c) activate widespread physiological adjustments to the arousing conditions; and (d) lead to behaviour that is often, but not always, expressive, goal-directed, and adaptive."

Emotions are often understood as general dimensions (such as positive and negative affect) with characteristic expressive, neurophysiologic and experiential elements (Hirschmann and Hollbrock, 1982) but next to basic emotions there are also more specific emotions. Laros and Steenkamp (2005) evaluated and regrouped basic emotions found in consumer research and specified four positive (contentment, happiness, love and pride) and four negative emotions (sadness, fear, anger and shame). For the proposed research two central dimensions of emotional expressions can be of focus: positive affect and negative affect. Positive affect and negative affect comprise distinct functions: positive affect is considered to be a representation of one's level of pleasurable engagement with the environment, whereas negative affect is thought to represent one's level of general distress – as these can be displayed through the emotions outlined above (Watson, Clark, and Tellegen, 1988).

Regarding measurement of emotions, methodological debates are prominent (Ulich and Mayring, 1992). Three different approaches can be distinguished in the measurement of emotions: besides the retrospective inquiry (i.e. memory of momentarily experienced emotions or situations where a questionable emotion was experienced) and the study of emotions in everyday life (i.e. the inquiry into emotions in specific real life situations) the induction of emotions is widely applied (Ulich and Mayring, 1992). The process of induction can be divided into two main categories: via exposure to emotional stimuli and via recall of emotional events from one's own life (cited in Suchi, 2011).

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For this research a mixture of the second and the third approach can be useful: In this view emotions can be asked about immediately after the presentation of a stimulus from everyday life and exposure to emotional stimulus. Therefore, we can proceed here with an inquiry on the assumption of a real – even if not fully every day experienced – life situation. Emotions are characterized based on the dimensions of strength, direction, quality and consciousness. For the measurement of emotions physiological, verbal and motoric indicators are available (Foscht, 2004). If emotions are not or only partially conscious, nonverbal measurements are also possible.

- ▪ *Physiological* indicators are for example skin reaction or other physiological reactions. However, with the help of indicators only the strength of emotions can be measured, while the direction- and quality dimensions cannot be recorded.

- ▪ Through observation *motoric* indicators (e.g. body language, face expressions) can be measured. Here statements can be made about the direction and strength of emotions. "It is possible to read pleasant and unpleasant emotions, and in some cases to determine the art of the emotion (Kroeber-Riel and Weinberg, 2003). These indicators can be used in the method of 'consensual validation' that will also be used in this research.

- ▪ *Verbal* indicators are often used additionally to physiological measures. Its measurement is based on subjective self-reporting of the interviewees. The most commonly used scales here are rating scales, especially semantic differentials[6]. The basis here is the "conviction that feelings are to a large extent embedded and expressed in the language" (Krober-Riel and Weinberg, 2003). In the classical form the semantic differential (Osgood et al., 1957) consists of a set of bipolar rating scales. Here, the interviewee or test person can mark his/her impression with a cross.

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[6] The Semantic Differential (SD) – a type of bipolar rating scale – measures connotative meanings, people's reactions to stimulus words and concepts defined with contrasting adjectives at each end of the scale. This scale measures both the direction of a reaction (e.g. good vs. bad) and the intensity of the reaction (slight vs. strong). Ratings are combined in various ways to describe and analyze the person's feelings.

- ***Other nonverbal*** *(next to physiological and motoric)* measurements are mainly with projective procedures (e.g. association tests) performed, that should move emotions into the consciousness of the test person. The expression of emotions is not only possible with words, but also for example with pictures or colours – like face tests or pictograms that can be classified as nonverbal measurements.

There are criticisms of verbal measurements of emotions, but it has to be kept in mind that emotions have a "strongly distinctive cognitive character" and cognitions can be surveyed with questionnaires very well (Konert, 1986). The current research will use a mixture of verbal and nonverbal (pictograms) measures (and as experiment motoric indicators).

2.5 Theories of consumer behaviour and behaviour change

In this subchapter those models or theories of consumer behaviour will be presented that are relevant in the context of the present research. As a starting point, it is important to point back to the section describing the meaning of consumption.

In conventional, neoclassical economics market transactions are the outputs of rational choices of fully informed consumers with stable preferences, who are maximizing utility or well-being through the act of buying goods and services. This view of the rational choice theory also assumes that through this process consumers can easily and freely pursue the good life and with increasing consumption our well-being increases as well. In this way, the description of consumer preferences can be derived from the expenditures on goods on the market. Later, Lancaster's (1966) consumer preference theory has been extended with the view that consumers do not consume goods themselves but the attributes belonging to the products and their values for the consumer.

Although rational choice theory cannot adequately explain human behaviour and the underlying social-psychological structure it is still a dominant model to date. Consequently, traditional approaches to moving consumers towards more environmental friendly consumption patterns assume that consumers are knowledgeable, well-informed and willing to change their behaviour according to the information provided them.

Since the 1930s the neoclassical view has been challenged with studies of Robinson (1933) and Chamberlin (1933) about imperfect competition as well as by Herbert Simon's (1955) theory of bounded rationality. Simon claimed that consumers cannot make perfect decisions due to limitation in time, cognitive capacity, attention and information processing skills and

draw attention to the significance of emotions for human choices (Simon 1983) that have to be incorporated in formal models of bounded rational choice (Muramatsu and Yanoch 2005):

> "Hence, in order to have anything like a complete theory of human rationality, we have to understand what role emotion plays in it." (Simon 1955)

Simon also argued that it is impossible to make rational decision due to the uncertainty about the future and the cost of acquiring information about the present.

The *Theory of Reasoned Action* (TRA) – one of the most influential models describing attitude and behaviour – was developed by Ajzen and Fishbein (1975) as a result of attitude research from the Expectancy Value Models and states that behaviour depends on a person's intentions to perform behaviour. These intentions are guided by two factors: the person's attitude toward the behaviour and subjective norms, acknowledging the power of relevant social actors in influencing behaviour. In this sense, growing social pressure for environmental-friendly actions would be likely to lead to pro-environmental decisions (Ajzen and Fishbein 2005).

The *Theory of Planned Behaviour* (TPB) is the extension of the Theory of Reasoned Action by the same authors (Ajzen and Fishbein 1991) resulting in the addition of a third factor. Therefore, next to the two factors (attitudes toward the behaviour and subjective norms), the perceived behavioural control has been added that refers to the person's perceptions of his/her ability to perform a given behaviour. This third factor can both directly (if consumers perceive barriers that prevent them from the planned behaviour) and indirectly affect behaviour (i.e. through intentions).

Behavioral beliefs and outcome evaluations → Attitude toward the behavior

Normative beliefs and motivation to comply → Subjective norm (social pressures)

Beliefs about ease/ difficulty of behavior → Perceived Behavioral Control

Attitude toward the behavior, Subjective norm (social pressures), Perceived Behavioral Control → Behavioral Intentions → Behavior
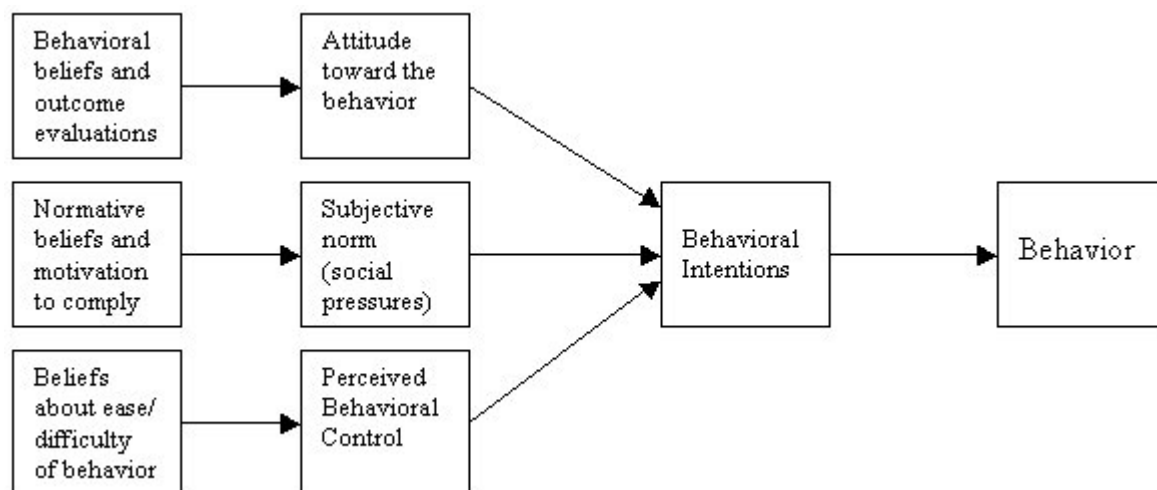
Figure 3: The theory of planned behaviour (Ajzen, 1991).

In 2010, Fishbein and Ajzen, after the debate on TRA and TBP, developed the Reasoned Action Model (RAM) by improving TRA and TBP incorporating contextual factors such as higher level influences of society or background of the individual. The model argues that one´s behaviour can be predicted by their ability to act on their intention.

Critics have suggested as limitations of the above theories is that "there is little insight into how the communicator can facilitate the crucial step from intention to behaviour, from preparation to action, [and]there is not a great deal of conceptual help provided here when the problem is perceived social pressures from others. One may identify problems with perceived norms; how to counteract such perceptions through messages is not necessarily intuitive" (Slater 1999, p. 341). At the same time, they can be helpful in the identification of specific beliefs to be reinforced. As the above theories do not provide much insight for the current study either, the research will be centered on theories encompassing the non-rational view of individual decision-making. As Pinter also pointed out (2002, p. 14), many criticisms evolved around this "linear and mechanistic 'transmission model' of decision-making".

This rational choice model assuming the rational consumer is still prevalent in modern economics. However, *the above theories provide less guidance in many cases when challenges are faced during carrying out communication campaigns and interventions*. This rather narrow view of the process of consumption assumes a direct relationship of

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consumption and welfare and satisfaction; at the same time it does not include the underlying psychological and sociological variables or the motivation to consume. Research in looking at the happiness of people has shown that after a certain minimum happiness does not increase with material growth (Argyle, 1987; Marks et al., 2006) since satisfaction depends on the reference to others. Sustainable consumption does not only involve the purchase and use of products, but to a greater degree, all decisions in the frame of the consumption process that incorporates the interaction of and dealing with needs and their satisfaction, the assessment of needs, purchasing, the use phase and the disposal phase.

The socio-psychological *Needs-Opportunities-Abilities (NOA) Model* (see figure 4.) plays an important role in environmental consumer research as well (Jager et al., 1997). This model is used in contrast to the rational *homo economicus* model and states that consumers are heterogeneous in their needs, opportunities and abilities regarding their consumption acts. According to the NOA model motivations are determined by physiological and emotional needs, while control factors like financial, spatial and cognitive barriers limit consumer behaviour. At the same time, opportunities like availability and information have an influence both on motivational and control factors and these three dimensions finally determine consumer behaviour.
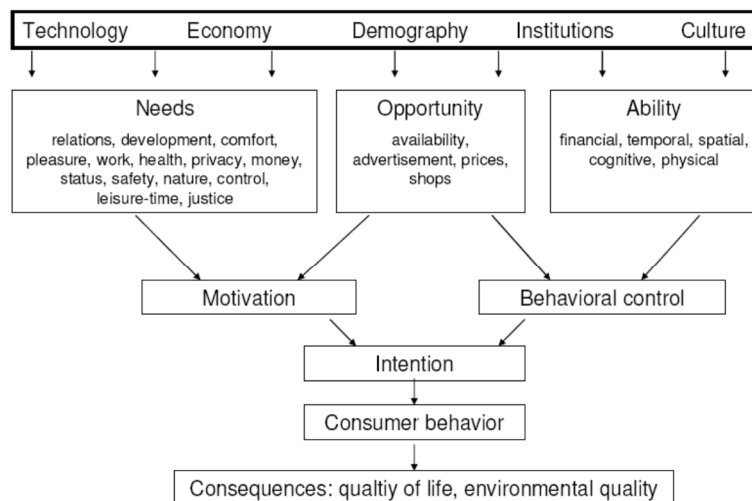
Figure 4: Tthe Needs-Opportunity-Ability model of consumer behaviour (Gatersleben and Vlek, 1998)

Another influential theory is the *Norm-Activation Model* (Schwartz 1973, Schwartz and Howard 1981) often used in predicting environmental behaviour responding to personal norms and feelings of moral obligation (that is closely connected to values). In this view consumers might move their behaviour in a more environmental-friendly way, if they know about the negative consequences of their current consumption patterns, even if it would cause individual costs (e.g. time effort, reduced comfort etc.). The model was proven to be successful in low-cost situations (when changing behaviour is not associated with high individual costs) and no serious "external" barriers (e.g. cost or time efforts, inconvenience etc.) are perceived (Preisendörfer and Diekmann, 2003).

The *Elaboration Likelihood Model* (ELM) of Petty and Cacioppo (Petty, 1977, Petty and Cacioppo, 1981, 1986) suggests that issue involvement influences cognitive elaboration, attitude change and behavioural outcomes. Based on the model, highly motivated people engage with the message through the central route processing or persuasion that is highly predictive of behavioural outcomes. Peripheral route persuasion occurs when the target audience interest or motivation is low therefore so-called peripheral persuasion cues have to

be used (e.g. celebrities).

Attitudes can be changed through different experiences, through communication but also even through behaviour change when new behavioural patterns (usually through persuasion) alter our attitudes and result in lasting behaviour change. In case of communication, attitudes help to understand how individuals interpret, evaluate and respond to different information and stimuli. While attitudes are frequently not predictive of behaviour, they have proven to guide behaviour: people accept and attend to information more in case of attitude-consistent information. Next to attitudes, there are various other factors heavily influencing our behaviour such as structural and unconscious drivers of action (e.g. habit).

To induce behaviour change is a particularly difficult task since behaviour is influenced by a huge variety of factors (see figure 5), norms and values (Jackson, 2005a) that is almost impossible to achieve via information campaigns alone. Traditionally two main types of instrument have been used to influence consumer behaviour towards environmental and social goals and encourage pro-environmental and pro-social behaviour:

1) the provision of information through labelling, awareness raising in order to help consumers to make informed 'rational' choices and

2) the use of price incentives and disincentives such as grants, subsidies, taxes.
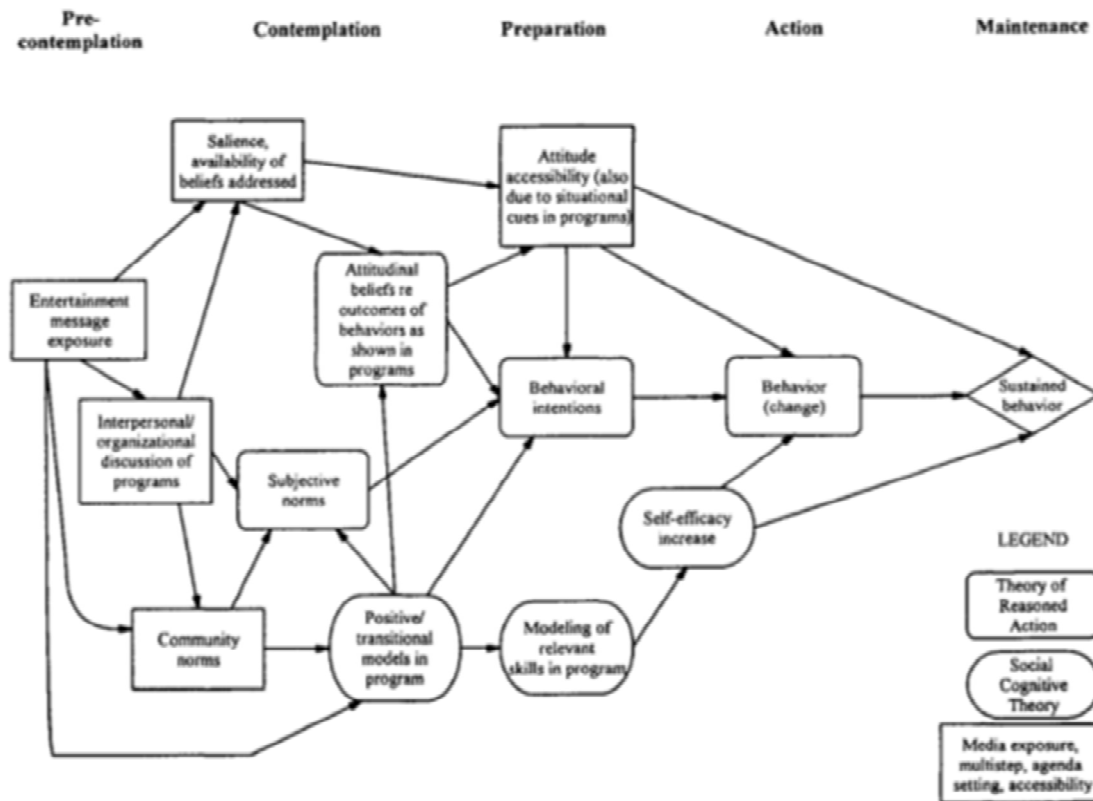
Figure 5. Persuasive impact of entertainment-education across stages of change: a cross-theoretical model (Slater 2002, p. 169, adapted from Slater 1999)

However, these instruments do not seem sufficient to result in the success expected as environmental degradation and other negative consequences of consumption are still continuing and increasing calling for a variety of other instruments aimed at specific target groups.

In order for someone to begin moving toward modifying behaviour, one must consider resolving an ecological problem as a personal gain. Individual gain can be understood very differently by different people. Behavioural changes touching on important cultural values and norms, ideals or social status, often cannot be achieved without incitement or even prohibition and can place the consumer in conflict between his or her existing environment, way of life, lifestyle, and the effort toward behavioural change leading to sustainable consumption.

Following Andreasen (1995), approaches to behavioural change in consumers can be grouped into five alternatives:

- **Education approach:** here the focus lies on educating people and providing them with information with the aim changing their beliefs. It assumes that consumers will do the right action if they understood what they are requested to do. However, the approach does not take into account the factor of social pressure, that behaviour will not necessarily follow beliefs and the facts may produce so-called boomerang effects (when the attempt to change attitude and behavior results in the direct opposite to that which was intended).

- **Persuasion approach:** this approach is used when already informed and educated consumers have to be motivated towards changing their behaviour with a focus on argumentation; its main format is social advertising. In this case facts might produce boomerang effects.

- **Behaviour modification approach:** the approach assumes that individuals act and do based on learning theory, which means they learnt the technique of the necessary action and the result of it will be satisfying. It assumes that individuals do behave in a certain way through learning techniques required for the specific action. Here, behaviour modification will be emphasized and the positive behaviour reinforced through rewards. Although the approach has proved to be successful, it is very costly and lacks integrity.

- The **social influence approach** assumes that individuals act in accordance with community norms and collective behaviours and the approach aims to influence and change them mainly through campaigns. Although the approach is likely to be successful, it takes for granted that all actions are "visible" and all social issues and norms are obvious and accepted. On the other hand in case of more individualistic

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values, when group norms and social isolation does not play an important role, the approach might not be effective.

- The **social marketing approach** applies different characteristics of the approaches above with a careful segmentation of its target groups: "Social marketing is the application of commercial marketing technologies to the analysis, planning, execution and evaluation of programs designed to influence the voluntary behaviour of target audiences in order to improve their personal welfare and that of their society" (Andreasen 1995).

Social marketing – as the general basis of the ecotainment approach described by Lichtl (1999) – aims to foster social change and improvement for a social or public good with a focus on influencing individual behaviour (Kotler and Lee, 2008). It systematically applies the techniques, tools and concepts of marketing and is practiced not only by commercial companies but also by governments, international aid organizations, agencies and education and communication professionals.

The above described theories target different obstacles and challenges in the behaviour change process, therefore, their integration into the communication strategy and intervention programs is reasonable. In consumer behaviour research *high-involvement behaviours*[7] (Engel et al., 1993) – measured by the personal relevance of the product or action communicated and the amount of decision-making required for purchase decisions (McWilliam, 1992) or perform the communicated activity – are described as developed through stages. For describing this process, several stage models have been elaborated, such as *Janssen's Four Rooms of Change* (contentment, renewal, confusion, denial) (2005), *McGuire's Communication/Persuasion Model* or the *Transtheoretical Model of Behaviour Change*

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[7] Involvement is measured by the degree of importance of the product to the buyer: perceived importance, hedonic and symbolic value of the product; perceived risk associated with its use.

(Prochaska and DiClemente 1984, stages described below).

As in the case of sustainable consumption or more generally for sustainable development the benefits of behaviour change can only be seen in the long-term while its costs are externalized to the individual and a change of basic values is needed, the social marketing approach can be seen as a promising option. According to stage models, behaviour change proceeds through a series of stages. The first model (McGuire's model) defines twelve stages of communication effects: Exposure to communication, attending to it, becoming interested in it, comprehending it, acquiring necessary skills, yielding to it, memory storage of the message, searching and retrieving the information, deciding on basis of retrieval for action, behaving in accordance with the decision, reinforcing the desired actions and consolidating the new lifestyle.

The latter stages model, **the *Transtheoretical Model of Behaviour Change*** (Prochaska and DiClemente 1984) describes five different stages consumers go through:

- precontemplation: consumers do not think of engaging in new behaviour within the next 6 months and are unaware of problems

- contemplation: consumers get aware of problems, think about change and taking action within the next 6 months and evaluate recommendations on behaviour

- preparation: consumers have the intention to take action within the next 30 days and have taken some steps in order to change behaviour

- action: consumers take action to change their behaviour as recommended for less than 6 months and

- confirmation: consumers maintain behaviour change for a longer time.

The stages model has proven to be very successful in health behaviour change programs and has increasingly been applied in social marketing (Prochaskaet al., 1994, Prochaska et al., 1996). The most effective communication interventions depend on the stage of the selected

target group. In order to design effective interventions, the identification of the respective stage of the target audience and the target groups itself is crucial.

2.6 Research framework

This section provides the theoretical framework of the research. As elaborated in the literature review, there is a lack of effective communication and public understanding of sustainability. Therefore, the investigation and proposal of effective communication approaches – especially towards those who are less interested in sustainability and also more materialistic or even hedonistic (as often claimed about younger generations) – is of utmost importance, first because of current levels of unsustainability on the global level and second, because it can help shape the understanding and conceptions of future development that can influence collective action and future policies.

As Pinter (2002) also pointed out, effective communication requires a sophisticated and well designed approach, making reference to Chandler's (1994) and Thorngate's (1996) work, summarizing the failures and weaknesses of "the linear and mechanistic 'transmission model' of decision-making". Accoring to Pinter (2002), the key characteristic of a new constructivist model of communication:

- Communication has to be embedded and interpreted in the respective social context that is never perfectly transparent,
- In a non-linear, dynamic communication, the audience is active and connected to the sender,
- The recipient is seen as active and engaged in communication with the capacity to respond, the meaning of communication is actively created,

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- The meaning created is influenced by many different factors, contexts and values,

- The interpretation of meanings created from communication changes over time depending on the different factors and contexts evolving,

- The medium used is influential in reaching the selected target group.

For the current research the ***Transtheoretical Model of Behaviour Change*** (Prochaska and DiClemente 1984) will be chosen as the main framework of the research – as it provides a framework for integrating the theories addressing behaviour change challenges (Slater 1999) – and its extension with affective variables (it will be analysed with the application of different forms and contents in the visual and social media).

The stages model highlights that people encounter different barriers in the different stages, therefore different interventions (different types of communication) have to be applied to help overcome barriers. First, people have to be informed about problems caused by different consumption domains, second, people have to be motivated and persuaded to get engaged (focus on attitudes or attitude change and motivating factors), third, people have to receive practical information on how to take action, fourth, some kind of feedback should be provided (tailored to people's values and motivations) and fifth, at the latest stage people should be reminded and feedback provided in order to maintain the new behaviour.

Going through the different stages is an iterative process, with acquiring more information and skills, people move to the next stage at varying degree and scale and even might return to an earlier stage (Nisbet and Gick 2008).

This framework and theory will be complemented with *segmentation on general value orientations and postmaterial values.* As the current research aims to analyse various factors aiming to achieve behavior change among young people, the study of personal attitudes and

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behavior, value orientation and individual socio-economic characteristics need to be carried out and supplement the Transtheoretical stage model. Concerning the general value orientations, following Scherhorn et al. (1997), a differentiation in promaterial and postmaterial orientations can be made as an extension of the concept of Inglehart (1977). Scherhorn et al. operationalise these orientations by relating them to the concept of "environmental compatibility", "social compatibility" and "commodity fixation" (through positional and materialistic value orientations)[8] of lifestyles: An individual with a postmaterial orientation values non-material fulfilment, which he or she does not want to give up for more material welfare. He is hence not fixated on commodities and his lifestyle is expected to be more compatible with nature and social requirements (Scherhorn et al., 1997). In contrast, the promaterial individual derives self-esteem from material goods and a high status in society (positionality dimension). Hence such an individual is characterised by a high commodity fixation and a low nature and social compatibility.

Promaterialism and postmaterialism of the selected target group can be investigated by scales, using a previously developed battery of items (Reisch et al., 1997), consisting of different statements in the four dimensions: material/postmaterial values, positionality, social and natural compatibility and materialism. In order to use the scale in this research, intercultural validation and adaptation of the scale for Hungary was carried out as part of the research along with the findings of the analysis of youngsters' value orientations and lifestyles. The validation process and results are described in chapter five, the validated items were used with survey administered during the focus group discussion (results are described under sub-chapter 5.2).

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[8] Social compatibility and responsibility refer to a behaviour that consciously takes notice of others' needs and actively contributes to the well-being of others. Under environmental responsibility we refer to the relationship an individual has towards nature, his/her feelings of responsibility for it and the resulting behaviour. Gläser (1991) defines a person as materialistic if he/she values goods not for their function but for possessing them. Positional or status and authority seeking behaviour and thinking can be described as a behaviour aiming to build up and keep a high-status position and a sense of 'superiority' against others or a behaviour led and guided by the desire to fulfil a certain role, status or (self)image instead of responding to a given situation in a flexible way.

The framework is further supplemented with the *ecotainment approach building on social marketing and emotional conditioning*. It is argued that entertaining messages (accompanied by convincing cognitive messages) through the mass media can especially be appealing in case of those consumers who show a low interest in ecological or sustainability issues and media programmes, such as youth or the less educated (Reisch, 2011).Based on the ecotainment approach, positive emotions can help consumers to move from non-interest (pre-contemplation) to the contemplation stage of behavioural change (Monahan 1995) and even further to action if communication is carried out in a sophisticated and target-group specific manner.

Following the „**Ecotainment**" (focusing mainly on the environment, a concept originating from sustainability marketing) or **sustainment** (further developed concept of ecotainment, focusing on all aspects of sustainability) **concept** (Lichtl, 1999, Reisch, 2011), entertaining messages through the mass media can especially be appealing in case of those consumers who show a low interest in ecological or sustainability issues. Emotions and entertainment are here in the foreground (a combination of "edutainment" and "infotainment") instead of purely information and fact dissemination (the factual-argumentative form) with an emphasis on providing solutions and options for taking action instead of focussing on problems. Especially these new approaches of the mediatization of sustainability have the potential to reach „broad masses" since they fit more the post-modern, visual image- and consumer culture than the traditional, cognitive-focused formats (Jansson, 2002), especially in today's "information overload". Communication under the "sustainment" concept should fulfil the following criteria (Schwender et al., 2008):

- it should cover ecological discourse or the debate of sustainability,

- it should offer solutions to viewers and allow them to relate to the message,

- the message should be embedded in an emotionally positive context.

The approach is threefold: first, to gain consumers' attention and interest by triggering positive emotions and second, to transmit convincing cognitive messages that inform and confirm prior attitudes towards behavioural change (Reisch, 2005, 2009, 2011) and third to enable and engage people within different approaches (such as car-sharing, collaborative consumption, exchange of goods etc.) in selected consumption fields (e.g. food, housing, mobility, living). In the German 'Balance' research project both media and consumer researchers took part with the aim of involving media professionals and one of the largest commercial television channels in the project[9]. As part of the project, several short videos (all together 6 videos created for the German 'Welt der Wunder' TV programme have been analysed) have been produced for the analysis resulting in the creation of the Ecotainment Index that evaluated the visual material according to the level they meet the Ecotainment criteria (Schwender et. al., 2008, measuring emotional-cognitive involvement, sustainability context and content and reach of the vidoes among the audience). The research concluded that sustainability is not 'impossible' to communicate but very much depending on the format. Another German project with the title "Integrating sustainability themes into media. Tools for the public sector. Sustainability and the media - integration of sustainability themes among NRW media partners." (Lubjuhn and Hoffhaus, 2010) examined examples of different sustainability communication programmes and projects with a focus on describing the status quo of media formats and list good examples with a media perspective.

These German projects are the main empirical studies conducted in this field and the current research adds to previous research by

- investigating a wide array of formats and contexts of visual material communicating sustainability,

- analyzing visual materials in the Hungarian context with both international and

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[9] [9] The researcher started this research as part of the Balance project and also took place in the preparation of the project.

Hungarian material,

-   analyzing the interrelationship between value orientations, emotional appeal, perceptions, and visions of sustainability and behavioural intentions,

-   complementing the research with innovative envisioning exercises,

-   adding the analysis of a social media site and some selected videos communicated through the site in order to see the effects of the two-way communication enabled by social media.

It has to be noted, that the current research aims to investigate only the first four steps of the stages model as the last stage, maintenance, cannot be followed and tracked due to the limited timeframe of the empirical research.

3 Research design and methods

3.1 Methodological approach

For the purposes of the PhD dissertation an inductive methodology was used. Triangulation of methods was vital for the reliability and validity of results including content analysis, netnography and quantitative analysis of questionnaire results. The research methodology helped to identify and analyse messages and themes, framing and ideologies which may then be used to augment more effective interventions for moving consumers towards adopting sustainable lifestyles. The research conclusions will "construct interpretive narratives from their data and try to capture the complexity of the phenomenon under study," as is requisite of effective qualitative researchers (Leedy & Ormrod, 2001, p. 103).

This mixed-method or multi-method research design includes both quantitative and qualitative methods for both data collection and data analysis. Johnson et al. (2007) distinguish between 3 types of mixed methods:

- Qualitative dominant,
- Quantitative dominant, and
- Pure mixed methods.

According to Johnson et al. (p. 123) mixed methods research

> "… is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration."

They (ibid, p. 124) defined the qualitative dominant approach as

"the type of mixed research in which one relies on a qualitative, constructivist-poststructuralist-critical view of the research process, while concurrently recognizing that the addition of quantitative data and approaches are likely to benefit most research projects."

The current research and applied methodology falls under the qualitative dominant approach. Process and structure of the empirical research was as follows:

Answering objective 1 and the related research questions: study the values, needs and worldviews around a desirable sustainable future of young people and understand current conceptions of a sustainable future among the youth and the (baseline) importance of sustainability for them.

Research questions related to objective 1:

What attitudes and values guide youngsters and characterize their lifestyles?
How do youngsters envision sustainable lifestyles in 2030 in Hungary and on a global scale? What does a sustainable lifestyle mean and how does it connect to wellbeing and a good quality of life?
What are the needs, values, imageries and worldviews framing the vision of a sustainable future among the target group?

- Quantitative: first the intercultural validation and adaptation of the German postmaterialism scale (developed by Reisch and Scherhorn) for Hungary was carried out with the use of paper-based self-administered questionnaire in order to prepare it for the analysis of value orientations of youngsters in Hungary (2007 autumn)
- Qualitative: envisioning workshops with the involvement of youngsters (2012 spring)
- Quantitative: measurement of value orientations, attitudes and consumer behaviour,

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knowledge and conception of sustainability of the target group with the help of paper-based self-administered questionnaire before focus group sessions (2013 spring)

Answering objective 2 and related research questions: Analyse the nature of contemporary sustainability communication messages of entertainment education, future visions of a sustainable life and the `ecotainment/sustainment` (Lichtl 1999, Reisch 2009) concept in selected visual communication material and web 2.0 formats and social media[10] aimed specifically at hard-to-reach consumers.

Research questions related to objective 2:

How are sustainable lifestyles and practices presented by the visual and social media to effect behavioural change towards sustainable consumption for low-interest consumers?

How should sustainable lifestyles and practices be presented by the visual and social media to effect behavioural change towards sustainable consumption for low-interest consumers?

-   Qualitative: content analysis of selected visual material as well as its evaluation, content analysis of discussions on social media combined with network analysis

Answering objective 3 and related research questions: Identify factors influencing failure and success for intentions of behaviour change of contemporary sustainability communication messages via selected visual materials and web 2.0 formats and draw conclusions about the potential of new forms of environmental communication to achieve a conscious altering of consumer behaviour towards sustainable consumption.

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[10] social media can be defined as the ''group of Internet-based applications that build on the ideological foundations of Web 2.0, and that allow the creation and exchange of usergenerated content'' (Kaplan and Haenlein, 2010, p. 61).

Research questions related to objective 3:

How can viewers of specific entertainment-education programs be influenced both affectively and cognitively toward sustainability? What are the media, social and individual mechanisms of visual communication responsible for new patterns of offline sustainable behaviour?

What is the role of emotions – and what kind of emotions (positive versus negative) – increase issue involvement in sustainability communication?

What are the effects of the selected visual materials and the social media?

- Quantitative: follow-up questionnaire on the assessment of cognitive learning (2013 spring)

- Quantitative+qualitative: measurement of the emotional effect of selected visual materials on the target group with the use of paper-based self-administered questionnaire used in focus groups (2013 spring)

The different phases following each other helped to comprehend the results and prepare the next research phase. The map of the thesis is visualised in figure 6.
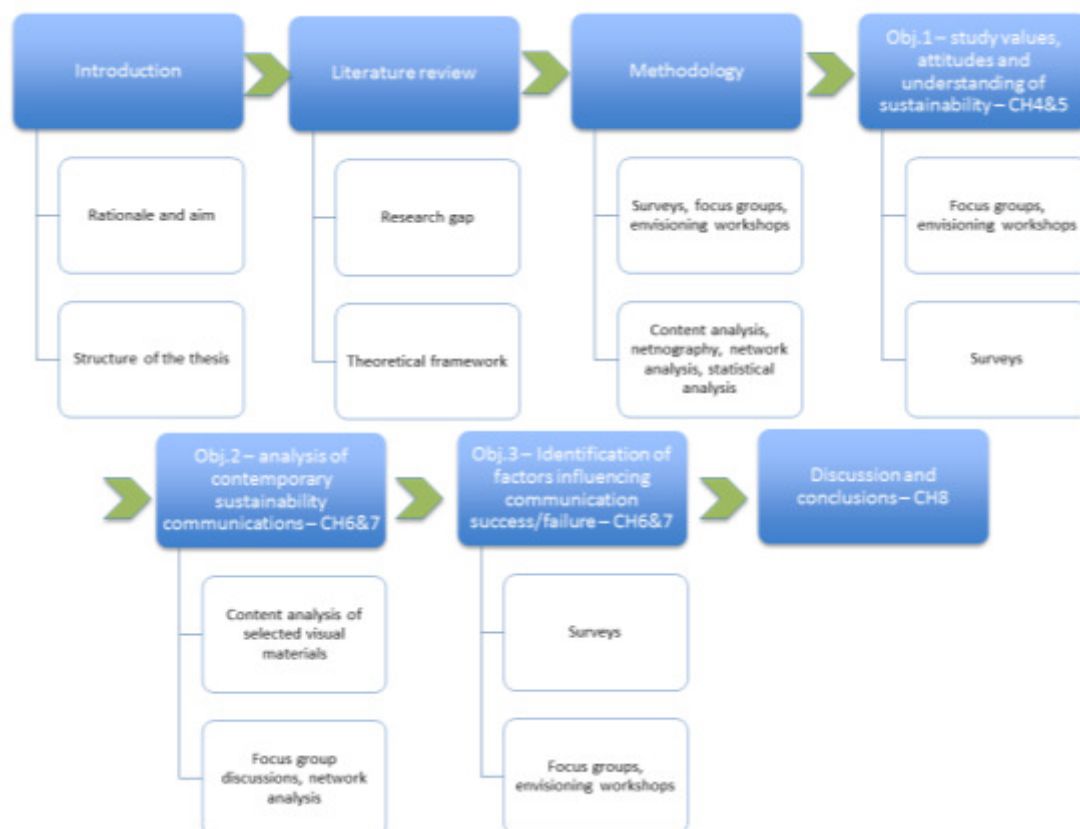
Figure 6: Map of the thesis

3.2 Methods of data collection

In the next subsections, more detail is provided on the data collection methods used in this research. The first subsection (3.2.1) describes the validation of the value orientation scale used in the questionnaire study. 3.2.2-4. Subsections consists of the description of surveys and focus group discussions to measure value orientations as well as the evaluation of the selected and analysed visual material studied. 3.2.5 provides details on the envisioning workshops and sections 3.2.6-8. focus on data collection for the exploratory study on a selected social media site.

3.2.1 Scale validation on the measurement of value orientations and lifestyles of youngsters

The current research aims to analyse various factors aiming to achieve behaviour change among young people, including personal attitudes and behaviour, value orientation and individual socio-economic characteristics. Concerning the general value orientations, following Scherhorn et al. (1997), a differentiation in promaterial and postmaterial orientations can be made as an extension of the concept of Inglehart (1977). Scherhorn et al. operationalise these orientations by relating them to the concept of "nature compatibility", "social compatibility" and "commodity fixation" of lifestyles: An individual with a postmaterial orientation values non-material fulfilment, which he or she does not want to give up for more material welfare. He is hence not fixated on commodities and his lifestyle is expected to be more compatible with nature and social requirements (Scherhorn et al., 1997). In contrast, the promaterial individual derives self-esteem from material goods and a high status in society (positionality dimension). Hence such an individual is characterised by a high commodity fixation and a low nature and social compatibility.

Promaterialism and postmaterialism of the selected target group can be investigated by scales, using a previously developed battery of items (Reisch et al., 1997), consisting of different statements in the four dimensions: material/postmaterial values, positionality, social and natural compatibility and materialism. The intercultural validation and adaptation of the scale for Hungary has also been carried out as part of the research that is described in chapter 5, along with the findings of the analysis of youngsters' value orientations and lifestyles. Test persons could mark on a Likert-scale from 1 to 6 whether the statement applies (=6) or does not apply (=1).

Translation of the questionnaire was done by using the modified version of the "translation/back translation" (Brislin 1970), and the "parallel blind technique" (Werner and Campbell 1970) methods, ensuring semantic and conceptual equivalence to the highest level. Modification refers here to translating items in a way to capture the meaning of the word to the highest degree. The translated questionnaire was tested by 10 different respondents. Based on their feedback minor modifications were made in order to achieve the highest semantic level. According to Mullen (1995) the equivalence of transplantation can be achieved through translating and back-translating the instrument by two different persons speaking the original and target language fluently. After following this procedure, differences between the original instrument and the Hungarian version were eliminated.

The equivalence of measurement was ensured through using the same 6 point Likert scale in the Hungarian version.

For the Hungarian validation the following methods were used: translational validity, construct validity (with factor analysis), and reliability through internal consistency (Cronbach's alpha) test. The final questionnaire was filled in by 113 respondents (aged 18-50) with different socioeconomic background such as university students, industry workers and bank employees.

Questionnaires measuring the above mentioned four dimensions (adapted from Reisch et al., 1997) as well as some basic questions on their use of media content and format and understandings and knowledge of sustainability were filled out by focus group participants during spring 2013 (as described in chapter 5).

3.2.2 Envisioning workshops

Envisioning workshops intended to help understand current conceptions of sustainability, and described the visions of youngsters about and around a sustainable world carried out as a form of participatory scenario building exercise.

"Scenarios are consistent and coherent descriptions of alternative hypothetical futures that reflect different perspectives on past, present, and future developments, which can serve as a basis for action" (van Notten, 2005).

Scenarios are expected to serve a wide range of functions in both policy making and knowledge brokerage (developing network and relationships between and within producers and users of knowledge). In particular, they have the potential to (Borjeson, 2006; Swart et al., 2004; van der Heijden, 1996; 2000; van Notten et al., 2003):

- visualize images of a desirable future pointing to different lifestyles, values, worldviews and perspectives, the way we consume, cultural shifts, and options for behaviour change;
- incorporate the normative aspects of sustainability including values, behaviours, culture and institutions.

While scenarios are consistent and coherent descriptions of hypothetical futures as described by van Notten (2005), in case of the envisioning workhsops emphasis is more on triggering participants to express and discuss their own and consensual images of the future by focusing on those factors that have a significant influence on our present and future. Another important element of the envisioning process was to ask participants to experience this future and respond to questions about their everyday life.

The envisioning workshops also served as the basis for the thematic selection of the videos. Most videos covered the areas youngsters raised during the vision building exercises. These themes included healthy food and diet, urban gardening, technological improvements and solutions, importance of local community, local and Hungarian products, alternative travel modes and house building, energy efficiency, different/sufficient lifestyle, less meat consumption, everyday tips and ideas for beauty and wellness, ethical leadership and living.

More specifically, the workshops carried out within this research aimed to give answers to objective 1 and the related research questions: study the values, needs and worldviews around a desirable sustainable future of young people and understand current conceptions of a sustainable future among the youth and the (baseline) importance of sustainability for them. Four envisioning exercises were organized, three of them in Bicske, one in Budapest, lasting for around 4-6 hours each. More detail is provided in Chapter 4 on the structure of the workshop and main questions addressed.

3.2.3   Survey on the measurement of emotions and emotional effects

In the present research emotions were measured before and after (in order to see the difference between emotional state of participants before and after seeing the videos and visual material presented) showing selected films. The evaluation of the videos is based on a content analysis of the videos, the focus groups and the emotional responses measured with the PANAS Scale developed by Watson and Clark (1988). To measure the connotative meaning, as a bipolar rating scale with contrasting adjectives at each end, the Semantic Differential is used. The Semantic Differential (SD) – a type of bipolar rating scale – measures connotative meanings, people's reactions to stimulus words and concepts defined with contrasting adjectives at each

end of the scale. This scale measures both the direction of a reaction (e.g. good vs. bad) and the intensity of the reaction (slight vs. strong).

The questionnaire contained open-ended questions as well asking respondents about their evaluation of the videos (what they liked and disliked, whether they have seen the videos before) and a short discussion followed each video too by using the PANAS scale (see Appendix I, e.g. question 9 of the questionnaire) among focus group participants (the same participants as described in 3.2.3) (Wattson and Clark, 1988), a nonverbal self-report instrument clustering emotions into different groups (negative passive or active, positive passive or active) where participants report emotions. The measurement was made with differently "emotionalized" report(s): "highly emotional", emotional and containing no emotions (factual-argumentative) or fear appeal. A test before watching the videos examined the emotional condition of participants in order to see the emotional impact of different communications on participants. The selection of videos and their thematic was based on the outcomes of the envisioning workshops. A detailed description, categorisation and list of videos can be found in chapter 6.

3.2.4   Focus group discussions

For the identification of key topics, subjective views and factors for failure and success, several research methods can be used, such as focus group discussions, observational studies or surveys. Focus group discussions are the most frequently applied qualitative social research method that was originally called group depth interviews. They intentionally contribute to the free flow of associations among the participants. They can reveal deep, usually unconscious feelings which could not be revealed in other ways. They are effective since they let respondents go beyond the common, learned social answers – they can express their personal experience, needs and expectations in a more spontaneous way. They also provide an

opportunity to reveal the actual motivational factors which – in many cases – participants are not even aware of (Ritchie and Lewis, 2003).

Nine focus group discussions were carried out in a high school in Bicske (35 km from Budapest) involving 74 students altogether, lasting for about 3-4 hours. Each group involved a number of students (between 6 and 10), aged between 16-19, in their last two years before going to university or starting work. With the help of their teachers, a careful selection of students was made in order to ensure an as much as possible heterogenous group of participants for each focus group session in order to avoid very different composition of groups participating. After participants filled in the questionnaire on their value orientations (that has been validated in stage 1) and media content interests, and watched 2-7 minutes long spots (3-5 spots on average) a discussion was held on each video with the aim of evaluating it. Based on opinion polls and media use analysis, this age group of consumers is less interested in media content presenting sustainability or environmental issues (National Readership Analysis, 2011).

The content related selection of the videos for measuring communication and emotional effects was based on the findings of the envisioning workshops. Most videos covered the areas youngsters raised during the vision building exercises, such as healthy food and diet, urban gardening, technological improvements and solutions, importance of local community, local and Hungarian products, alternative travel modes and house building, energy efficiency, different/sufficient lifestyle, less meat consumption, everyday tips and ideas for beauty and wellness, ethical leadership and living among others.

After the content-related selection was made, a comprehensive search was carried out to find appropriate visual materials on the internet in various styles and formats. Some of them used the fear-appeal in an emotional and entertaining style (e.g. "mad sausage", see table 19 and Appendix III for the list of videos) or in a factual-argumentative style (e.g. "six degrees"), the

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ecotainment approach (e.g. the Vegan love story, local community, energy saving is sexy), a simple speech (e.g. speech of Uruguay's president) or a mixed approach (e.g. Jamie Oliver's TED talk).

For the selection of visual materials, the following sources have been used: websites of the main civil society organisations (both in Hungary and on the international level), YouTube (with specific keywords for content selection), online discussion boards, advertisement agencies. The Association of Conscious Consumers' (TVE – Tudatos Vásárlók Egyesülete) website has a media library covering various domains of sustainable consumption and consumer advocacy collecting visual materials on the international level on different aspects of sustainability. Several of the videos screened and evaluated were listed on TVE's website; some were heavily discussed on the internet and social media sites or produced by students for a sustainable marketing course at a Swiss university (The Vegan Love Story).

For the comparison of traditional communication approaches and the ecotainment approach as well as to ensure the validity of the results *control groups* were also included in the research. Control groups consisted of persons (5 and 6 participants in the 2 groups respectively) who receive no "treatment" (in the form of positive emotions triggering behaviour change towards sustainability) by using fear-appealing films and factual-argumentative (without positive stimuli) visual media content (see the list of visual material shown during the focus groups in Appendix IV).

3.2.5 Follow-up survey to test memory and assessment of cognitive learning

As a message is almost never presented to the target audience at the same time as when the target should respond to the message but it is rather expected that the target will respond later with an appropriate behaviour change, retrieval becomes an important issue. Here, distraction, retrieval cues and storage are important elements (Bator and Cialdini, 2000; Kroeber-Riel and

Weinberg, 2003) considered as a proxy for behaviour change. For measuring this process a questionnaire was developed within the research to be filled in by the respondents (focus group participants) appr. 3 weeks after the focus group discussion (see Appendix II). It was important to measure how much and what content has been recalled by the tested persons and whether any further steps have been taken to change behaviour.

3.2.6   Exploratory study on selected social media site

An exploratory analysis was carried out of a social media/Facebook site focusing on beauty and wellness of women integrating sustainability messages and topics in its communication. It aimed to identify factors that influence the success or failure in communicating sustainability messages and their effects on intentional behaviour change and explore the potential of new forms of environmental communication to consciously shift consumer behaviour towards sustainable consumption among consumers less interested in sustainability.

With an exploratory aim, a specific analysis was carried out on the comments of some of the videos of Hogyan Legyek Jó Nő (How to be a Cool Woman) Facebook page. The analysis is based on the combined usage of two different methods. Netnography was used as one of the most relevant methods to analyse online user groups and respond to the growth of the Internet and online communities. The method is a modification of ethnography for online platforms (Kozinets, 1997) with flexible solutions on the level of involvement into the discussion of the investigated group. The spectrum of the researcher's involvement is visualized below (Kozinets, 2006).

Figure 7. Involvement of the researcher in the process of netnography, based on Kozinets (2006) and Kelemen and Piskoti (2010)

3.2.7 Netnography

Kozinets describes ***netnograph***y both as a product and as a methodology. As a product, it is a "written account of on-line cyber culture, informed by the methods of cultural anthropology" (1997, p. 470), and as a methodology it is a "new qualitative research methodology that adapts ethnographic research techniques to study the cultures of communities that are emerging through computer-mediated communications" with the aim to "identify and understand the needs and decision influences of relevant online consumer groups" (2002, p.62.). Netnography has been used in many different fields such as in consumer education (Sandlin, 2007), as a method for lead user identification in the area of sustainable consumption (Belz and Baumbach, 2010), new consumer movements (Kozinets and Handelman, 2004) or consumer boycotts (Kozinets and Handelman, 1998).

Netnography brought anthropological methods into marketing (Kozinets, 2002) and communication research. It studies consumers as members of virtual communities in online settings who share the same interests in lifestyles or brands. With the help of netnography trends, consumer needs, experiences and consumer behaviour can be analysed.

It allows the researcher to systematically analyse virtual communities (Kozinets, 2010) and to "gain access to consumer discussions by observing and/or participating in communications on publicly available online forums' (Nelson and Otnes, 2005, p. 90).

The standard procedure of netnographic research includes the following stages:

1. *Entrée* into the group the researcher wants to investigate: identification of the relevant online community,

2. *Data collection and analysis.* Kozinets suggests two approaches for data collection:

   a. Written communication between the participants directly copied and pasted,

   b. The researcher collects field notes based on his or her observations, as well as their interactions and discussions.

3. Ensure *trustworthiness of interpretation*: in netnography, the researcher can only analyse the communication of the member and not the consumer in real life settings. We cannot identify the member, collect demographic data on them or check whether their 'online identity' is different from their real life identity. As Kozinets (2002) states "the uniquely mutable, dynamic, and multiple online landscape mediates social representation and renders problematic the issue of informant identity" (p. 64). Therefore, it is important to see the communication between participants as the unit of analysis and not the participant.

4. Follow *research ethics*: Kozinets addresses two ethical questions for netnography. The first concerns the issue whether online platforms should be considered as private or public areas and the second, what would consent mean on online platforms. The questions are not resolved yet, as there is the argument that academic research can be carried out without ethical consent, on the other hand, on many online sites users assume privacy (Haggerty, 2004).

5. *Check members/provide possibility for feedback* (Kozinets, 2002, 2010): it provides the opportunity to reflect back and provide feedback to members on the findings of the research. When the researcher conducts only "observatory netnography" it usually does not go back to the community.

In this analysis observation netnography and the standard procedure was used in order to be able to investigate the information without any external effects to the flow of communication among the users.

The Facebook page "Hogyan legyek jó nő" was founded in 2011, has over 160,000 subscribers and it provides daily tips and tricks for women on beauty, healthcare, handicraft, home-decoration and similar subjects. It encourages user to reuse goods and use natural materials. The page and its owner, Ms Nora Takacs regularly produces and shares content on more environmentally friendly products and their use as well as on topics related to social responsibility. Its primary users are in the age between 18-24 years (based on the publicly available information and user statistics page of the Facebook page, more than 20,000 are talking about the page (the page is mentioned (hyperlinked) in the users posts or conversations on Facebook) and many of its members are actively participating in sharing ideas, experiences and feedback. Due to the large size, the age category of the members and its lifestyle orientation, the page was suited to answer the research questions of the current study. As the site is open to join and easily accessible, entrée to the site was easy.

3.2.8   Network analysis

Parallel to netnography, **network analysis** methods were also used to define and to identify the role of individual users in communicating messages on social media.

To find solutions or successful interventions, engaging the public is a key component; participation and cooperation is needed among individuals and organisations and the empowerment of citizens to solve their own problems. Efforts to empower people through innovation need to consider strategic diffusion options. When moving from information

societies towards network societies facilitating agents, intermediaries and innovation networks play a major role in connecting people, ideas and resources, bringing them together efficiently. Another important aspect is the role of social networks and the social media in connecting and empowering people and building up new networks. Social networks play a fundamental role in the diffusion of information, knowledge and learning. According to Langley and van den Broek (2010), social media applications are increasingly used by businesses, non-governmental organisations and consumers to enhance behaviour change towards sustainability and are seen as the mark of consumer empowerment and education (Kozinets 1999, Kozinets et al. 2012). Network analysis is based on network theory: connections (directed and non-directed) between nodes (from molecules in biology or chemistry to users in online platforms) influenced by natural and social systems, social rules and habits are playing an extremely important role in the overall and general structure and behaviour of the analysed entity. Network analysis has gained importance in marketing and communication as peer-to-peer communication (liking, sharing and commenting) is a widely visible user behaviour. Identification of information hubs, key opinion leaders and other specific user groups is crucial in social media campaigns. And, as all campaign materials are available on social media platforms it is also crucial for traditional campaign platforms as well.

Actors' roles are identified within the network and actor centrality is explored. Actor centrality refers to actors who are the most active and have the most ties to others in the network (Wassermann and Faust, 1994).

For the purposes of data collection, all videos have been collected (produced and commented in the period from 2011 to 2014) that cover topics on how to prepare cleaning or beauty products made of natural ingredients and comments, opinions and experiences of members related to the selected visual materials. Opinion exchange, reactions and discussion on the

videos and topics were monitored, the selected posts and comments were copied and pasted into Microsoft Word, categorized and analysed. In the period covered, there were 7 videos produced, 323 comments and 198 commenters (the most active discussion activity was traced in case of the shampoo video).

Comments were separated and categorized (see chapter 7), and the direction of responses, the acceptance of the messages, and framing were explored.CytoScape, a free and open source network analysis software (http://www.cytoscape.org/) was used to analyse data on users, comments and categories. The software is able to import csv files (csv is the abbreviation of Comma Separated Values) with information on the nodes (users) and edges (connections) between them. It is also possible to import different attributes of the nodes or edges. In case of this research, all information based on the comments' evaluation (stage, content) was imported as node attribute. The software enables the user to calculate different metrics on the data file, such as the number of connections, number of incoming and outgoing edges (indegree and outdegree) and to visualize the result by changing colours, shapes and size of nodes, edges and labels accordingly. It is also possible to modify the default network layout by grouping the nodes according to different attributes helping the analyst to evaluate the results.

3.3 Data analysis

Content analysis – It consisted of the coding of focus group discussions, envisioning workshops, and the selected short films, their evaluation as well as of selected discussions on social media. For the examination of the content of the discussions content analysis can be applied that comprises a variety of methods and techniques and has its roots in the social and behavioural sciences. Content analysis is a proven method in communication, journalism and psychology. It is defined as a systematic, objective, quantitative analysis of message characteristics (Neuendorf 2002), such as human interactions or character representation.

For the statistical analysis of the survey results the statistical package SPSS was used. In order to describe general patterns and trends in the data set, descriptive statistics was used by applying both univariate and bivariate methods for the analysis of the relationship between value orientations, knowledge and attitudes towards sustainability messages. The ways of presenting the results are tabular, graphical and statistical. In order to present the distribution of a variable, frequency tables were obtained. For the detection and display of the association between two variables cross-tabulation was used in case of the majority of variables/questions. The open questions were first categorized as well and frequency tables obtained. In case of the postmaterialsm/materialism questionnaire principal component analysis and factor analysis was applied.

Netnography – The analysis of data consisted of the classification, coding and contextualisation of messages. Following Kozinets (2010), it was important to focus not on the objective meaning of the text and messages but on the meaning of the messages for participating people in the situation under study in the online discussion.

Social Network Analysis (SNA) could help to identify the different relational patterns between individuals that give rise to empowerment, knowledge sharing, and the diffusion of ideas and to deepen the understanding of social dynamics. The SNA was based on the assumption that meeting societal needs effectively needs effective public engagement. It considers the opportunities and benefits of different lifestyles and social innovation models towards change in behaviour. SNA was used to identify the characteristics of networks, identify key actors/shadow networks/connections/ collaboration networks as well as to identify actors (with a special emphasis on Key Opinion Leaders, Rising Stars, HUBs – actors with a very high number of connections – and Bridges – intermediaries between smaller communities), networks and new ways of emerging collaborations among individuals necessary for engagement and promotion of behavioural changes. Data collection was done by analysing the social media platform of the selected Facebook fan site "Hogyan legyek jó no/How to be a cool woman" and two selected videos by downloading and analysing its data.

Actors' role is identified within the network and actor centrality is explored. Actor centrality refers to actors who are the most active and have the most ties to others in the network (Wassermann and Faust, 1994).

3.4 Ethical issues during the research

According to national regulations (Act CXII of 2011. on information self-determination and freedom of information) and consultation with CEU's Counsellor for data protection and ethical issues, a favourable ethical opinion was sought and found prior to the envisioning workshops and focus group discussions, and individual and full school consent were given in writing beforehand.

In my study, I chose to remain an observer and not introduce myself to the community when conducting the exploratory social network analysis of the selected social media site on Facebook. As the selected group ("Hogyan legyek jo no") is open and anyone can join and read the discussions and content, the comments and visual materials (the latter was available at different other pages as well) were publicly available. On the other hand, I did not want to influence opinions of the commenters in any direction.

3.5 Limitations and opportunities for further research

The dissertation research project focused on how new communication strategies, affective components such as emotions, feelings predict and influence behaviour from attending to the communication to storing and retrieving the information and possibly to behaving in accordance with the decision made by consumers. Reinforcement and consolidation of the new lifestyle is out of scope of the current research and it would be an opportunity for further research to investigate.

The research focused only on the specified target group and the selected communication material with an emphasis on positive emotions developed for the purpose of the research. It would be an opportunity for further research to analyse the hypotheses of the current research

on different target and lifestyle groups through representative samples as well as investigate generational differences.

Limitations are also associated with the low response-rate on the follow-up survey (which may also signal a general non-interest in sustainability among the target group) and therefore the results of that part of the study may be regarded as rather indicative. Next to that, the involvement of another school for further investigation would increase the robustness of the results.

4 Conceptions of a sustainable future society and lifestyles among youth

4.1 Envisioning workshops among youngsters

"In Dreams Begins Responsibility" William Butler Yeats, 1914

The following section is intended to help understand and describe the visions of youngsters about and around a sustainable world carried out as a form of participatory scenario building exercises and aims to give answers to the following research questions:

- How do youngsters envision sustainable lifestyles in 2030 in Hungary?

- What does a sustainable lifestyle mean and how does it connect to well-being and a good quality of life?

- What are the needs, values and imageries framing the vision of a sustainable future?

The findings of the envisioning workshop were intended to provide the basis for the selection of visual materials for the focus group sessions at the next phase of the empirical research. Here, domain specific (food, mobility and housing) suggestions and visions were particularly important in selecting the visual materials.

The envisioning workshops also helped to understand how youngsters would like to live, what their goals, fears and dreams are about a good life, a good society and a good future as well as within the different scenarios evolving from the discussions. The detailed description of the visions provides important insights about what aspects of these futures and sustainability are relevant and possible to speak to the youth about. The results served as a good basis for the selection of the visual material and, at the same time, helped the interpretation and evaluation of the material both regarding content and form of the videos (such as ethical aspects or the negative feelings towards "too much" technology).

As the quote at the beginning of the chapter says, the future we aim for and look forward to also tells a lot about what we care about and would take responsibility for. The futures youngsters envision for themselves represent the paths they would like to follow and are open to hearing about.

4.1.1 Methodology and background of the empirical part of youngsters' visions of a sustainable future

Four separate workshops were organized with the involvement of youngsters, aged 16-19, in their last two years before graduation and leaving school and most of them going to university (these workshops were independent and separate from any other focus group sessions conducted in this study). Three workshops took place in Bicske and one in Budapest, covering a broad socio-economic background of participants. As teachers were very enthusiastic and helpful in the high school in Bicske, they could provide substantial help in setting up the groups and design the workshop process. In order to get familiar with the style of communication and interactions of the target group, I visited two classes before the workshops took place.

The first workshop focused mainly on discovering youngsters' aspirations, feelings and understanding of sustainability and what they think about the development of a sustainable future. The first workshop allowed more flexibility in the articulation of visions in the different domains. The second, third and fourth workshops were more focused on the development of a desirable sustainable future and on generating context and domain specific visions. The first two workshops lasted for 4,5-5 hours (morning sessions in Bicske), the third (afternoon session in Budapest) for 3 hours and the last one for 6 hours (morning session in Bicske). Before the workshops took place, both school and individual consent was asked and given in a written form.

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At the workshop young participants were not asked about their knowledge, at the beginning of the exercise a short introduction and discussion about sustainability was incorporated with the goal to cover the main idea around sustainable development and successfully carry out the envisioning work. The main aim of the discussion and scenario building was to understand how a positive and sustainable future is envisioned by the youth and compare the results with current aspirations, communications and interventions aiming towards sustainability. The results also served to help the selection of visual materials to be analysed during focus group discussions and discover the most interesting consumption and lifestyles areas for further investigation.

Structure of the workshops

The workshop consisted of sections as follows:

1. Introduction about the aim of the workshop and introduction of participants

2. General brainstorming session on sustainable futures: all ideas written on post-it notes

3. Clustering of ideas: answer clouds and initial clustering

4. Group work covering the different domains with a specific set of questions for food, mobility and housing (participants were divided into 3-4 groups with 4 members each)

5. Group presentation and discussion

Introduction

The purpose of the first section of the workshop was to introduce the aim of the research/task, the structure of the exercise, time plan, and expectations and encourage them to be creative and innovative. The researcher and participants also introduced themselves. The challenge of the task was to envision a future that is different from the current state and it has to be a desirable future. In the background an automated slideshow was showing pictures of "change"

and sustainable solutions and initiatives. As it turned out in each workshop, students had no knowledge of sustainability; therefore, the introduction had to cover a discussion on the understanding of sustainable development.

Brainstorming

The purpose of the second section of the workshop was to generate as many ideas as possible about a desirable sustainable future. Students wrote down on post-its (1 idea per 1 post-it) their ideas about "any aspect of the future you want to live in"; given it is a sustainable future. It was emphasized that there is no wrong answer or questionsand their ideas can be contradictory. The brainstorming session lasted about 10-15 minutes. All ideas were collected and put on a large board.

Clustering of ideas and generating first draft of visions

All students helped to cluster ideas, from smaller clusters to bigger ones, regroup them and with the help of the facilitator/researcher labelled the clusters. This first part of section lasted about 20-30 minutes. In the second part of the section, participants were grouped and along the questions developed for guiding the process (see the list of questions below), worked in groups in order to develop the visions according to the initial draft. This part lasted about 45 minutes.

Presentation and discussion

At the end of the workshop, each group had to elect a "host" to present their results and visions written down along the questions and post-its on a large sheet of paper. In each workshop the presentation was followed by a lively discussion and the visions enriched with additional ideas.

After all workshops had been carried out, all visions were put together and developed to the resulting four visions that will be described in the forthcoming sub-chapters. These visions served as the guiding themes when selecting the themes and styles of videos for the focus group discussions and content analysis of the videos. The visions and associated thoughts, emotions and questions raised regarding these alternative futures shaped not only the selection of videos but also highlighted the areas future sustainability communication should focus on.

Questions aiming the brainstorming process of the workshops in the food domain

- What has changed in the way a family does its food shopping? What sources, how will food production change?
- Where does food come from? What food will people eat? How many times a day will we eat and what?
- How will food quality change? What criteria will guide our shopping? How will our diet be healthier?
- How will food be marketed and sold?
- What kind of food will be provided at schools and workplaces?
- How and where will the food you eat be prepared? At home by yourself, out of home etc.?
- What food will be affordable?
- How will a kitchen look like in the future in an average household?

Questions aiming the brainstorming process of the workshops in the mobility domain

- How will you organise your work/school mobility? What and where will we work? Why will we work?
- How will leisure mobility look like? What will we do and with whom will we spend our free time?
- Where will we live? What will influence the value of properties? How will we choose location?
- How will holiday mobility look like? How will we spend our holiday time?
- How will the car sector and air travel evolve?
- How will public transportation change?

Questions aiming the brainstorming process of the workshops in the housing domain

- How will cities, streets look like? How will infrastructure change?
- How will buildings and houses look like?
- What kind of gadget will we use?
- How will we use water and energy in our homes? How will we able to reduce our energy and water consumption?
- How will neighbourhoods look like? What services, facilities will be around?
- What kind of devices will we use in our homes?
- Why and how will we learn? What will be the gaol and form of education?
- What role will consumption have in our life? How will our consumption patterns, habits change?

4.1.2 Youngsters' visions of a desired sustainable future in Hungary

In the following section, the visions elaborated and discussed by youngsters are presented, highlighting the main steps towards the visualised sustainable futures.

4.1.2.1 Narrative of vision 1 – Science and technology world

Technology and science provide solutions for most of the challenges we face. There are new dietary alternatives due to the need to eat healthier and due to rising food prices. Food capsules and instant food – made from natural ingredients (vegetables, fruits, meat, herbs etc.) exclusively – are produced on a mass level with the emergence of a new kind of multinational companies. Ingredients are provided by local producers. The nutritional value of instant food will be based on and satisfying the needs of different life stages, health background, lifestyles etc. The purchase of the capsules for one meal will be state funded. Fresh, real food will be very expensive and affordable for only the rich; as a consequence food mafia and food criminality will emerge. Eating will not be about taste and enjoying meals anymore but about nutritional value, at the same time people become healthier and obesity is solved. We 'eat' 2 times a day.

Companies will provide free mobility services – public transportation based – for their employees and public transport will be free for private needs as well. Work places will be densely organized in high-tech buildings in order to use public spaces better. The use of old, motorized vehicles will be prohibited in order to tackle air pollution. Public transportation will go through massive development in 2 phases. First, the magnetic rail system and its infrastructure, making the travel of long distances safer, faster and more comfortable throughout the globe. Second, the use of the air for travelling in cities, between countries – and even to travel to other planets – will develop fast as well and 'flying cars, buses and other objects' will be used. Houses will become energy and environmentally efficient, self-

sustaining and equipped with automatic, intelligent environmentally-friendly devices and various applications. Intelligent smart phones will be used to organize our life, communicate and entertain or monitor and control our health. Houses will go high and use renewables exclusively but floating houses and living under the ground and water will also be mainstream. Textiles will be 'self-cleaning' and display our health conditions, we will use flying shoes. Water and energy use will be monitored, water be filtered decreasing water consumption to one third of the current level. The main characteristics or keywords of this vision are: technology-driven future and lifestyles, flexibility and mobility.

Most important characteristics of the food domain: food and diet are functional, fast and based on nutritional value and not on taste and enjoyment, diet-related health problems are solved through optimal nutritional values of food pills, prices of natural food are extremely high, food alternatives solve problems of under- and malnutrition.

Most important characteristics of the mobility domain: individual transport becomes expensive; the use of futuristic vehicles is mainstream, flying public transportation promoted and subsidized, prohibition and punishment of the use of old, dirty technologies, mass development of magnetic railway system and flying mobile objects that are fast, clean, safe and comfortable.

Most important characteristics of the housing domain: smart, intelligent houses with all kinds of digital and holographic devices and services making everyday life easier and cleaner (clean, cook, organize everything), giving advice on and monitoring the use of water and energy.

4.1.2.2 Narrative of vision 2 – Smart, flexible and intelligent life"

People are aware of solutions (mainly technological) for a healthier and more sustainable lifestyle therefore they are actively engaged in finding solutions for challenges they face. Many will be producing food on roof gardens in cities; the state will support its development. Countries and regions will adapt to climate change, e.g. exotic fruits will be more widespread. Genetic modification will increase in those regions where quality food is not available. The number of schools providing education in agricultural production will increase therefore the quality of production improves. Quality food will be in focus instead of quantity therefore overproduction will be solved. It will be possible to buy online, but people will still prefer to go out to do and enjoy shopping. Modern, smart kitchens with self-cleaning equipment, multiple functions and high energy efficiency characteristics will help to organize and keep a healthy diet, buy food and monitor the food eaten.

Magnetic railway is generally widespread and available. Public transportation develops considerably, is more comfortable, faster, safer and for longer trips there will be wellness services. Air travel will be cleaner, not polluting and affordable. Cars will be more environmentally friendly with new fuels.

People prefer to work close to the place where they live and use the bike, public transportation or walk to work, are encouraged to share cars that drive with new, clean fuels. Quantity of bike lanes will increase. Congestions are avoided with regulation as well – e.g. on specific days only cars with selected registration numbers are allowed to be used. For leisure time activities special bus services can bring people to selected programs. More entertainment programs will be organized in green, outside, esp. programs engaging people in physical activity and bringing people together.

Education will be more practice oriented and prepare for everyday life. Digital technology and holograms will bring scientists, professionals into schools. Schools will be flexible and focused on creativity and individual skills. Lifelong learning will be the norm and people work to improve professionally, fulfil their aspirations and societal needs.

In cities roof and wall gardens are widespread as well as houses that produce their own energy. CO2 emissions, energy consumption and water consumption are monitored in smart houses. Renewable energy is available for everyone. Location will be chosen based on work availability, people move frequently and are flexible. Everyone will look for healthy, green places, services, infrastructure in short distance, closer to the place where we live. Public buildings will be modernized, much attention is paid to clean, noiseless streets. Most equipments work with voice control and supervision, 3D phones are used. At fashion stores figure scanning helps to choose the right dresses and there will be personalized style consulting.

Bath towels are not used anymore as body dryers are used in order to avoid washing and the spread of bacteria. Intelligent hologram walls will tell weather conditions, time, news and help organize our day, cooperate with our phone and monitor our diet, counting calories and nutritional values.

Most important characteristics of the food domain: quality food will be in focus instead of quantity therefore overproduction will be solved. Food will generally purchased online, but people will still go out to do and enjoy shopping, especially fresh food. Modern, smart kitchens with self-cleaning equipment, multiple functions and high energy efficiency characteristics will help to organize and keep a healthy diet, buy food and monitor the food eaten.

Most important characteristics of the mobility domain: Magnetic railway is generally widespread and available. Public transportation develops considerably, is more comfortable, faster, safer and for longer trips there will be wellness services. Air travel will be cleaner, not polluting and affordable. Cars will be more environmentally friendly with new fuels.

Most important characteristics of the housing domain: Houses and flats will mainly be rented making moving to one place to another easy; most houses will be state-owned with regulated energy consumption and regulated sizes. In cities roof and wall gardens are widespread as well as houses that produce their own energy. CO_2 emissions, energy consumption and water consumption are monitored in smart houses. Renewable energy is available for everyone.

4.1.2.3 Narrative of vision 3 – Local and self-sufficient world

People prefer to have a healthier diet and lifestyle. Diet is based on seasonal, local and organic food and a good balance of meat, eggs, fruits and vegetables are consumed. Meals are mainly prepared at home with friends and family members and always made from fresh ingredients; people eat 4-5 times a day. Many are self-producing in their own gardens or on community/roof gardens. At public institutions, especially at schools and kindergartens, seasonal, local and organic food is offered with high nutritional value by paying attention to children's food and health education. Food production and consumption is organized on local and regional level, soled or ordered directly from producers or purchased at farmers' markets, local stores, and the quality of food increases. More intelligent technology will help to keep food healthy and tasty when meals are prepared and to minimize food waste. People enjoy cooking and eating together.

People strive for a better balance of work and free time what they spend with friends and relatives. Companies will provide free, environmentally friendly mobility services, especially public transportation, bikes for employees. Public transportation will become faster, cheaper and more comfortable. It will be obligatory to take longer periods of vacation every year, possibly repeating several times a year, making people less stressed and happy, and keeping families and other social connections active. In order to decrease air pollution, car use will be minimised (e.g. max. 20 hours a month), at the same time new fuels will be used and travelling by car will not be fossil fuel dependent. In the centre of education stands creativity and focus on individual skills and aspirations.

Support and subsidies will be available for environmentally conscious solutions, developments and devices, especially for those making houses self-sustaining, producing their own energy, recycling and cleaning water. The value of properties will depend on the

characteristics of neighbourhoods, availability of services, facilities, workplaces within short distance, green areas and mobility infrastructure (fast railway, bike lanes, and public transportation), possibility and level for self-production.

Most important characteristics of the food domain: food education important already in childhood, healthier food and diet with seasonal and local food in focus, food prepared and consumed mainly at home, use of intelligent technology for keeping food longer healthy and fresh and to minimize food waste (monitoring of food eaten and available at home), buying food is preferred from each other within the community and from the region, self-production, more value based on local resources and culture.

Most important characteristics of the mobility domain: public transportation and biking, walking preferred, location is selected based on travel needs to workplaces and services, institutions – reducing commuting, regulation for decreasing car use in order to minimize air pollution.

Most important characteristics of the housing domain: local energy production esp. with solar panels, energy smart houses, strong state support for building energy smart communities.

4.1.2.4 Narrative of vision 4 – Ethical, postmaterialistic world

In this scenario acceptance and tolerance are in the foreground, no prostitution, famine and hunger, wars and discrimination (ethnic background, sex, religion etc.) exist. Life conditions improved for everyone, people live a slower lifestyle and achieved a higher level of satisfaction, live without stress, are environmentally conscious and have the desire to live healthier. Politicians work to improve the life of people and for the society and political corruption does not exist. Life is not focused on earning money. All people equally have the right to get employed and get good quality education with a focus on creativity and individual needs, skills and capabilities. The focus and task of education is to help fulfil own aspirations and motivations, desires and dreams, to develop ourselves. Better, modern technology will be used in schools; there is less stress on children. There will be good quality services provided for the elderly as well.

Fresh, healthy, organic food, especially vegetables are affordable for everyone. We eat less meat but of very good quality. Roof gardens are widespread. Import decreases, state supports fair, small scale production and farmers and focuses on domestic production. The number of fast food restaurants decreases significantly and small shops are available widely. At public institutions meals are based on vegetables, fruits and fish and less meat. People eat five times a day and warm meal for lunch, traditions, health conditions and preferences (e.g. vegetarian) are always taken into consideration. Production and processing is well and strictly controlled. GMO should only be used if it helps solving hunger in developing countries.

Cities become dense, public transport is automatized; the structure and infrastructure of streets develop in line with these developments. Air travel uses new, clean fuels and becomes faster, cheaper and safer. Travelling to work will be mainly by public transport and bikes. Work should allow a good work and life balance. By having more free time, people are less stressed,

healthier and happier. For leisure programs – that is spent with friends and family – people mainly use public transport, taxi and a very good bike infrastructure.

Passive houses are widespread and kitchens are computerised. Renewable energy, grey water and rain water are used in each house. Smart phones are used for all kinds of purposes and services.

Most important characteristics of the food domain: Fresh, healthy, organic food, especially vegetables are in foreground and less meat. Roof gardens are widespread. Strong emphasis on fresh food purchased from small producers and at farmers' markets. Import decreases, state supports fair, small scale production and farmers and focuses on domestic production. The number of fast food restaurants decreases significantly. At public institutions meals are based on vegetables, fruits and fish and less meat. People eat five times a day and warm meal for lunch, traditions, health conditions and preferences (e.g. vegetarian) are always taken into consideration.

Most important characteristics of the mobility domain: People mainly travel by public transport and bikes. There are automatic technological developments in mobility that increases safety on roads.

Most important characteristics of the housing domain: Passive houses are widespread and kitchens are computerised. Renewable energy, grey water and rain water are used in each house.

4.1.3 Summary

One of the main findings of the research was that youngsters do not know what sustainable development covers and a long introduction and discussion was needed at the beginning of the envisioning exercises. Without this knowledge, students would not be able to develop visions that are in accordance with the main ideas of sustainability. At the same time, we can conclude that the envisioning exercises had a significant learning effect. After the discussion the youth was not only able to put sustainability into context but could easily understand how current and future lifestyles influence our future, what the role of individuals and society for sustainability is. Short after the envisioning exercises teachers at the school reported about the "success" of workshops in the increase of sustainability knowledge of students. Many of the teachers repeated the workshops in their classes involving almost all their students in the exercises.

18-19 years old teenagers being just 2 months before their graduation exam seemed to be anxious about their future and somewhat pessimistic about their chances (esp. entering university, starting work, etc.) in the near and even longer term future. This view was reflected at many places and phases of the workshop. The majority of students in each workshop stressed that without a global crisis people will not change their behaviour and without behaviour change we would experience a global catastrophe destroying the current system. According to their opinion this would be the only chance to change the unsustainable and destructive patterns of the current system. The crisis or catastrophe described was both environmental, economic and socio-political. Suggestion of participants pointed to immediate interventions coming from the government in the form of strict regulations, taxation especially in the areas environmental degradation/protection, health and food safety. Some students took the opposite side and suggested using positive enforcement and incentives, at the end a good

mixture was proposed. Teenagers believed that the disaster expected would happen in their lifetime.

While students clearly called for immediate action from the government (in the articulated visions as well) in the future, in the present they were pessimistic and disappointed towards politicians and the activities of the government (both past and current).

Male students generally favoured technological solutions (very often in an extreme, sci-fi style) and some more female participants focused on visions focusing on communities. Generally, in each workshop youngsters had a strong sense of community and empathy, concern for others and articulated their concerns not only about their own future and future generations, but the older generations as well.

In all narratives technology is part of the envisioned future though to a varying extent. In the plenary discussion at each workshop, students displayed an ambivalent feeling towards technology, as it is something they welcome; but on the other hand they were afraid technology would take too dominant and uncontrollable a role in the future.

The local community vision was shared and welcome for the majority of students, but it was very much associated with an extremely simple life and the current state and reality of poor villages in the country.

Another important aspect of all visions was the importance of a work-life balance and having a meaningful life and work. Students were generally reluctant to share their belongings and equipments, ownership is still dominant in their future thinking. It is also difficult to envision a limit on air travel, the development of public transportation is seen as crucial. Another sensitive issue was the idea on limiting meat consumption (especially due to the financial constraints households are facing nowadays. According to recent surveys in 2013 and 2014,

half of the households in Hungary have problems buying proper food for themselves, e.g. OECD, 2014).

The envisioning workshops provided invaluable insights for the selection of the visual material for the focus group sessions. Youngsters came up with plenty of ideas on how a sustainable future society should live by 2030 and what practices should be adopted in the domains of food, mobility and housing. Participants also reflected on the ideas collected and discussed what initiatives and ideas are acceptable or impossible to accept for them as an envisioned sustainable future society.

5 Scale validation and application for the measurement of attitudes and behaviour of young people towards sustainability

The aim of this chapter and the first empirical phase of this thesis were to carry out validation in Hungary of the postmaterialism scale developed in Germany by Reisch and Scherhorn (1998) and Neuner et al. (1998), and through its application among the focus group participants, to study the role of values, attitudes and behaviours of youngsters towards sustainable lifestyles. There are various scales developed measuring general value orientations, postmaterialism and environmental values (eg. the New Environmental Paradigm by Dunlap et al. 2000, general value orientations and environmental values by Schwartz 1992, Schultz and Zelezny 1999, postmaterial values by Ingelhart, 1977) that could have been validated in the Hungarian context. However, as the proposed scale measures not only the environmental dimension of value orientations but also social and materialistic values and commodity fixation, and was previously applied by the researcher in the Western European context, it has been chosen as the most appropriate measurement tool for the current research. It provided an excellent opportunity to compare Western and Central European (post-socialist) value orientations and simultanously measure the four dimensions described above within the focus group discussions with youngsters.

5.1 Validation of the postmaterialism scale

5.1.1 Background of the first empirical phase and main hypotheses

The current study validated (in order to be able to use a reliable instrument in the Hungarian context) and used the findings of Neuner et al. (1998), Reisch and Scherhorn (1998) –

following the work of Inglehart (1977) – distinguishing postmaterial and promaterial value orientations, divided into lifestyles according to their "environmental responsibility and compatibility", „social responsibility and compatibility", egoistic orientations with a status seeking "positional" and „materialistic/promaterial" clusters, by analysing the symbolic and compensating characteristics of consumption as well.

A postmaterialistic person values non-materialistic satisfaction over materialistic wealth that he/she would never sacrifice for more material wealth, is not focused on possession and his/her lifestyle is more compatible with social and environmental expectations. By contrast, promaterialistic persons define themselves and others through possessions and through status in society (positional dimension and characteristics), and their lifestyle shows low compatibility with environmental and social requirements.

The questions measure the following value orientations with various items in the following four dimensions: positional orientation, pro/postmaterial value orientation, compatibility with nature and social responsibility. For measuring social responsibility the scale developed by Berkowitz and Daniels (1964) and further developed by Bierhoff (2000) was also incorporated. In order to clarify to what extent consumption and status seeking have a compensating role in the life of an individual the materialism and positionality indicators were used. The four indicators were measured through the use of scales.

5.1.2 The main hypotheses of the survey

Hypotheses relating to this part of the research had two dimensions. The first dimension concerned the validation of the results in Hungary with the assumption that besides cultural differences the analysis would prove the scale as a reliable instrument in Hungary and I would be able to distinguish similar clusters as in the original German scale.

The second dimension of the hypotheses is based on the assumption that there is a correlation between the different behaviours measured which directions and strengths are similar to those developed in Germany as follows:

- H1: there is a positive correlation between socially and environmentally responsible behaviour,

- H2: there is a positive correlation between status and authority seeking and materialism (commodity fixation),

- H3: there is negative correlation between status seeking/authority and social and environmental responsibility,

- H4: there is negative correlation between social and environmental responsibility and hedonism.

5.1.3 Positional behaviour

Positional or status and authority seeking behaviour and thinking can be described as a behaviour aiming to build up and keep a high-status position and a sense of 'superiority' against others or a behaviour led and guided by the desire to fulfil a certain role, status or (self)image instead of responding to a given situation in a flexible way (Reisch 1995, Reisch 1998).

In both cases (to keep a certain position or to fulfil a desired role) the individual's self-esteem is dependent on a desired status to be achieved or to be kept – be it higher material wealth, social status or an opinion already developed that the individual would never change in any circumstances (Hirsch 1976, Scherhorn 1989).

This positional character is considered to be the result of the socialisation process (Reisch, 1995) in that the individual defines his or her role compared to other groups in society. Any change to this role or status will be encountered as threatening as it provides safety and satisfaction resulting from a higher position. When Scherhorn (1988) developed the instruments for measuring positional character, his main point of departure was the hypothesis that the reduced availability of goods and their acquisition presupposes an advantageous position and symbolises it at the same time attaching a positional character to it (the position). The main problem with it lies in its compensating effect and reason. For measuring positionality, Reisch (1991) and Scherhorn et al. (1988) developed the positionality indicator set that investigates the following characteristics describing positional behaviour with the use of a 6 point Likert scale:

- Achieve and maintain a higher position compared to others,

- Endeavour to fulfil an expected or desired role, status or image/self-image,

- Pursuit to attain or maintain a higher social or economic status,

- Acting from an already established viewpoint or opinion that cannot be changed in any circumstances,

- Self-esteem depending on own viewpoint and "I always have to be right" mentality that the individual would never think over.

When measuring positionality, the two items describing conformity had the highest mean values: namely clothing and houses should be „in accordance" with the expectations of others/society. The lowest value was measured for the item „It would be difficult for me if a smaller car would overtake mine". At the same time, it has to be noted that in the sample university students were overrepresented. As most of them do not own a car, this item has relevance only on the theoretical level.

Items	Mean	Std.
For me, it is important to give orders during my work and performing my tasks	2,9	1,3
As far as possible I would always want to drive a car of my status in society	3,1	1,6
I enjoy if people pay attention to and look up to me	4,3	1,4
It is important for me that my apartment looks impressive	4,5	1,2
It is important to me that I am always dressed up properly	4,7	1,1
I need competition with others to see how good I am	3,7	1,3
What I said once should not be changed.	3,6	1,4
I am very ambitious and always want to perform better than my „competitors", be it sports, work or in my leisure time.	3,8	1,4
It is important for me to bring my opinion to force on others.	4,2	1,2
It would be difficult for me if a smaller car would overtake mine.	1,9	1,4
I would primarily expect my employees to follow my directions and orders.	3,5	1,4
If I am convinced o something once, I will not change my opinion.	3,3	1,5
I definitely want to have a career and move forward professionally.	4,4	1,4

Table 3: Statistics of answers given for the positionality scale

To test the reliability of the positionality scale, internal consistency of the 13 items described in Table 2 was used based on the Chronbach's alpha indicator. The value of Cronbach's alpha

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is between 0 and 1 measuring inter-item correlations within an instrument indicating to what extent items of the scale fit together conceptually (Nunnally and Bernstein, 1994). The recommended value should be either minimum 0.6 (Malhotra, 2002) or 0.7 (Hair et al., 2010). In this analysis, we regarded the scale consistent if Cronbach's alpha was above 0.7. In case of the positionality scale the value was 0.751.

For the analysis of the scale, principal component analysis and VARIMAX rotation (a varimax solution yields results which make it as easy as possible to identify each variable with a single factor) were conducted, correlations between the variables used were studied by using the KMO (Kaiser-Meyer-Olkin, sampling adequacy tests to find out whether the partial correlations among variables are small) test. For factor formation the 'eigenvalue (amount of variance in the data described by the factor; when a factor has a large eigenvalue, we assume this is because the factor represents some trait or characteristic common to the tests) greater than 1" criterion was applied. Based on the Kaiser criterion 3 factors have been developed, the total variance explained by the factors was 53% (see Table 3.).

| Factor | Eigenvalue | Variance (%) | |
		Per factor	cumulative
1	2,8	21,2	21,2
2	2,3	18,0	39,2
3	1,8	13,9	53,0

Table 4. Factor analysis of the positionality items

The first factor accounted for 21.2% of the variance, the second for 18% and the third for 13.9%. The combined factors account for 53% of the variance. The analysis resulted in three different factors. The first factor covers individuals „striving for a higher social status" (F1) that is characterised by the desire to be better and special than others in society. For those belonging to this group it is important to give orders to others and to belong to a higher status group than others in their environment.

The second group covers the „competitors" (F2) who are achievement oriented, for them, competition and to keep better performance than others is important.

The last, third group is characterised by a high level of „inflexibility and stubbornness" (F3), who insist on an opinion or decision in a stubborn way or is not open to rethink any decision or opinion in any circumstances. For this group retaining their position is very important.

	Items	F1	F2	F3
Q1	For me, it is important to give orders during my work and performing my tasks	**0,658**	0,129	0,086
Q2	As far as possible I would always want to drive a car of my status in society	**0,757**	0,049	-0,094
Q3	I enjoy if people pay attention to and look up to me	**0,651**	0,405	-0,185
Q4	It is important for me that my apartment looks impressive	**0,521**	0,225	-0,040
Q5	It is important to me that I am always dressed up properly	**0,474**	0,127	-0,180
Q10	It would be difficult for me if a smaller car would overtake mine.	**0,459**	0,056	0,402
Q11	I would primarily expect my employees to follow my directions and orders.	**0,513**	-0,340	0,490
Q6	I need competition with others to see how good I am	0,080	**0,839**	-0,061
Q8	I am very ambitious and always want to perform better than my „competitors", be it sports, work or in my leisure time.	0,135	**0,831**	0,212
Q9	It is important for me to bring my opinion to force on others.	0,302	**0,443**	0,334
Q13	I definitely want to have a career and move forward professionally.	0,408	**0,607**	-0,241
Q7	What I said once should not be changed.	-0,254	-0,014	**0,748**
Q12	If I am convinced of something, I will not change my opinion.	-0,098	0,080	**0,735**

Table 5: Factors for the positionality scale (varimax rotated)

Comparison of the results of the original and Hungarian scale

The original German results show a slight difference from the Hungarian results. In case of the German scale 3 factors could be differentiated (Neuner et al., 1998): the described factor „striving for a higher social position" (F1) and the „inflexibility and stubbornness" (F3) factor are the same, but the third group is rather a conformist group. In that sense, the validation of

the positionality scale is not fully comprehensive, probably due to cultural and economic reasons.

5.1.4 Materialism

It is obvious that the objects and goods we possess and use do reflect our personality and lifestyle to some extent, such as the clothes we wear, the car we drive, the furniture we buy or the house or apartment we live in: all of these are forms of self-reflection (Csikszentmihalyi and Rocheberg-Halton, 1981). Csikszentmihalyi and Rocheberg-Halton (1978) distinguished two forms of materialism: a more harmful level called 'terminal materialism' and a harmless form termed 'instrumental materialism'. In case of terminal materialism self-construction and happiness mean that happiness, psychological health and identity are heavily determined through the acquisition of goods and it serves as a guiding principle in their life (Fromm 1987, Daun 1983): „an orientation emphasizing possessions and money for personal happiness and social progress" (Ward and Wackman 1971, p. 426).

According to Belk (1985) materialism refers to

> „the importance a consumer attaches to worldly possessions. At the highest levels of materialism, such possessions assume a central place in a person's life and are believed to provide the greatest sources of satisfaction" (p. 265).

Gläser (1991) defines a person as materialistic if he/she values goods not for their function but for possessing them.

Kasser et al. define materialism as

> „the belief that it is important to pursue the culturally sanctioned goals of attaining financial success, having nice possessions, having the right image (produced, in large

part, through consumer goods), and having a high status (defined mostly by the size of one's pocketbook and the scope of one's possessions)." (Kasser, Ryan, Couchman, & Sheldon, 2004, p. 13)

For highly materialistic people the desire for possessions has no boundaries or a maximum level, originating from psychological disorders and the dissatisfaction with their own life and the self, having a decisive role in their self-construction:

> „Valued material possessions ... act as signs of the self that are essential in their own right for its continued cultivation, and hence the world of meaning that we create for ourselves, and that creates ourselves, extends literally into the objective surroundings"
>
> (Rochberg-Halton 1984, p. 335)

Sometimes self-esteem and life satisfaction is connected to the symbolic values and access to goods and services. Materialism can also be expressed in the way we deal with used and old goods, if the person prefers to buy new products even if the old one is still well-functioning or he feels the need to acquire something new when the old one is not the most up-to-date anymore.

Another dimension of materialism refers to the level of intensity with which we enjoy the act and process of buying. Highly materialistic consumers enjoy the 'utility' of having expensive equipment, plenty of goods, exclusivity, luxury products and shopping malls. Instead of necessity and covering basic needs, the main reason for shopping is enjoyment. Huge shopping malls, plazas, airports represent places where people do not only do their shopping but look for leisure activities, amusement and recreation, making the everyday life into an inspiring experience, invoking new desires on a continuous basis.

Researchers have developed various measures and indicators for analysing materialism such as of Campbell (1969), Moschis and Churchill (1978), Belk (1984), or Richins and Dawson

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(1992, 2004) and Inglehart (2000). Richins and Dawson's scale has been validated in many countries, e.g. in Hungary (Hofmeister Tóth and Simányi, 2005), in Denmark, France and Russia (Griffin et al., 2004).

During the validation process, items measuring the quantity and value of goods had the highest mean value, describing the importance of these items of almost all respondents.

Items	Mean	Std.
I love having a lot of „stuff", e.g. lots of clothes, sport equipments and devices etc.	4,0	1,5
I love having nice and prestigious things around me.	4,1	1,4
I find the atmosphere of shopping malls and streets exciting and stimulating.	2,6	1,3
I do not like my stuff if they get worn.	2,4	1,3
What is really important for me: exclusive atmosphere, valuable and expensive and the most up-to-date fashion clothes.	2,5	1,3
I pay attention that all my stuff has the same style in my room/apartment.	3,7	1,4
If there is a new trend or fashion, I do not really like (after a short time) my old stuff anymore.	2,2	1,2
I often think about how nice it would be if I could afford a more luxury lifestyle.	3,6	1,4
Everything around me must have a certain niveau and style.	3,7	1,4
For me it is obvious to equip my office/apartment/room with modern equipments (e.g. kitchen aid, energy saving devices, computers etc.).	3,7	1,3

Table 6. Statistics of answers given for the materialism scale

Cronbach's alfa measuring the internal consistency of the materialism scale was 0.836. For the analysis of the scale, principal component analysis and VARIMAX rotation were conducted; correlations between the variables used were studied by using the KMO test. For factor formation the 'eigenvalue greater than 1" criterion was applied. Based on the Kaiser criterion 3 factors have been developed, the total variance explained by the factors was 53% (see Table 6.). The first factor accounted for 21.2% of the variance, the second for 18% and the third for 13.9%. The combined factors account for 53% of the variance. The analysis resulted in three different factors

Based on the Kaiser criterion (principal component analyses with VARIMAX rotation) 2 factors have been developed, the total variance explained by the factors was 52,5% for the 10 items. The eigenvalue and variance values are listed in Table 6.

| Factor | Eigenvalue | Variance (%) | |
		Per factor	cumulative
1	2,8	27,5	27,5
3	2,5	24,9	52,5

Table 7. Factor analysis of the materialism scale

In this dimension two factors can clearly be distinguished (no other groups, such as "negative materialism" could be distinguished), the questions measured the forms and level of materialistic orientations. The first group can be characterised by „abundance and exclusivity" (F1). Those individuals belong to this group who value being surrounded by lots of expensive and exclusive stuff and find shopping malls very stimulating. The second factor is called „fashion, trend and modernity" (F2). In this group people tend to favour the newest trends and fashion and also clearly prefer new goods over their old ones.

The segments can be clearly distinguished – as the main aim of the analysis –, the segments are internally homogenous (segments are homogeneous within and heterogeneous between each other).

It is important to note that in both groups there is the desire for more luxury that might result from the desire to achieve Western European lifestyles.

	Items	F1	F2
Q1	I love having a lot of „stuff", e.g. lots of clothes, sport equipments and devices etc.	**0,782**	0,086
Q2	I love having nice and prestigious things around me.	**0,719**	0,295
Q3	I find the atmosphere of shopping malls and streets exciting and stimulating.	**0,708**	0,170
Q5	What is really important for me: exclusive atmosphere, valuable and expensive and the most up-to-date fashion clothes.	**0,743**	0,172

Q4	I do not like my stuff if they get worn.	0,057	**0,573**
Q6	I pay attention that all my stuff has the same style in my room/apartment.	0,292	**0,604**
Q7	If there is a new trend or fashion, I do not really like (after a short time) my old stuff anymore.	0,357	**0,720**
Q8	I often think about how nice it would be if I could afford a more luxury lifestyle.	0,434	**0,472**
Q9	Everything around me must have a certain niveau and style.	0,412	**0,622**
Q10	For me it is obvious to equip my office/apartment/room with modern equipments (e.g. kitchen aid, energy saving devices, computers etc.).	0,006	**0,722**

Table 8. Factors unveiled for the materialism scale (varimax rotated)

Comparison of the results of the original and Hungarian scale

The Hungarian results basically correspond with original German scale. The German research unveiled two factors that are in accordance with our results. The only difference is that the desire for more luxury clearly belongs only to the „abundance and exclusivity" group and some items – Q2 and Q4 – are less dominant when unveiling the factors.

5.1.5 Social compatibility and responsibility

Social compatibility and responsibility refer to a behaviour that consciously takes notice of others' needs and actively contributes to the well-being of others. Socially responsible individuals do not only devote time and financial resources for themselves and their closest environment but actively contribute to communities or social groups.

Socially compatible action and behaviour can mean different things: active engagement (in family or in the neighbourhood or in a community), responsibility, respect for others or stick up for others (e.g. for immigrants or people living in developing countries). The weakest form of social responsibility is donation; the strongest form is devoting our leisure time and activity.

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According to Giddens (1996) social responsibility strongly correlates with taking care of others, on the other hand many studies show that this connections varies considerably across different cultures (Miller et al., 1990). Therefore, social responsibility is moral obligation in some cultures, in others it is a matter of individual decision. Bierhoff (2001) concluded in one of his studies carried out in Bulgaria, Germany and Italy that social responsibility is interpreted similarly but due to historical and cultural factors the level of it differs considerable.

If the autonomy of a person is distorted, the individual feels vulnerable, therefore all activities are dependent on those external factors that make the person vulnerable (extrinsic-intrinsic motivation dichotomy, Deci and Ryan, 1985, Ryan and Deci, 2000). This vulnerability is also expressed in keeping distance from others. It is impossible to feel responsible for others if the individual acts based on external factors, motivation and of necessity. In contrast, intrinsic motivation facilitates solidarity and taking care of others and enhancing their well-being. Actively engaging in social activities and social responsibility reflects an important aspect of postmaterial behaviour.

Several instruments have been developed for measuring social responsibility, such as by Berkowitz and Daniels in 1964, that was incorporated – besides the scale developed by Neuner et al. 1998 – into the scale used for validation, but the majority of items had to be dropped.

A high acceptance and consent was measured between the items measuring the role of individuals in society and their opportunities to act in a socialy responsible way. Respondents felt individuals can do a lot for the community and helping others, and aslo felt objective towards passivity at political elections (data collection was carried out in the summer of 2007). The item „For me it is important to always finish what I have started to do", completion of tasks and activities got a high mean value as well.

Items	Mean	Std
I do not have time to deal with others' problems.	2,1	1,2
Taking care of others is mostly understood as interfering in someone's private life. Therefore, it is best if we do not interfere in others life.	2,4	1,3
I think each person on the individual level can do a lot to help others.	4,7	1,1
Generally, I think it is not worth to deal with others' problems, we cannot really do anything anyway.	2,3	1,3
Individuals alone cannot do anything with social injustice.	3,6	1,6
I regularly help the 'outsiders' of society (e.g. Immigrants, refugees, disabled people, the elderly and other disadvantaged).	2,4	1,1
I cannot deal with others' problems; I have enough to deal with in my own life.	2,6	1,4
In my work it is the most important to help others.	3,5	1,2
I want to rest and enjoy life in my free time and not to deal with others' problems.	3,8	1,3
For me it is important to always finish what I have started to do.	4,9	1,1
If I work in teams, usually I stay in the background.	2,7	1,4
Why should we vote during elections if our votes do not change much.	1,5	1,1
It is not a big problem if we sometimes disappoint our friends, we cannot always do and be good to everyone.	1,5	1,0

Table 9. Statistics of answers given for the social responsibility scale

Cronbach's alpha for measuring the internal consistency of the social responsibility scale was 0.711. Based on the Kaiser criterion (principal component analyses with VARIMAX rotation) 2 factors have been developed, the total variance explained by the factors was 44.2% for the 13 items. The eigenvalue and variance values are listed in Table 9.

Factor	Eigenvalue	Variance (%)	
		Per factor	cumulative
1	4,1	31,3	31,3
2	1,7	12,8	44,2

Table 10. Factor analysis of the social responsibility scale

In both groups the distinction between individual well-being and the well-being of the society is clearly highly emphasised. The first group can be best characterised by „refusal/rejection to interfere into someone's private sphere" (F1), persons belonging to this group are not really interested in challenges and problems of the community and society. Members of this group live isolated, are insensitive and regard taking care of others as interfering in someone's private life. Another important characteristic of this group is the feeling of powerlessness.

The second group is called „altruistic, helpful" (F2), characterised by a high degree of the willingness to take care of others, being active and engaged.

		F1	F2
Q1	I do not have time to deal with others' problems.	**0,698**	-0,274
Q2	Taking care of others is mostly understood as interfering in someone's private life. Therefore, it is best if we do not interfere in others life.	**0,719**	-0,051
Q4	Generally, I think it is not worth to deal with others' problems; we cannot really do anything anyway.	**0,796**	0,040
Q5	Individuals alone cannot do anything with social injustice.	**0,637**	0,055
Q7	I cannot deal with others' problems; I have enough to deal with in my own life.	**0,772**	-0,183
Q9	I want to rest and enjoy life in my free time and not to deal with others' problems.	**0,656**	-0,310
Q12	Why should we vote during elections if our votes do not change much.	**0,626**	0,300
Q13	It is not a big problem if we sometimes disappoint our friends, we cannot always do and be good to everyone.	**0,635**	0,007
Q3	I think each person on the individual level can do a lot to help others.	-0,337	**0,492**
Q6	I regularly help the 'outsiders' of society (e.g. Immigrants, refugees, disabled people, the elderly and other disadvantaged).	-0,066	**0,610**
Q8	In my work it is the most important to help others.	-0,106	**0,510**
Q10	For me it is important to always finish what I have started to do.	0,276	**0,443**
Q11	If I work in teams, usually I stay in the background.	0,035	**0,544**

Table 11. Factors unveiled for the social responsibility scale (varimax rotated)

Comparison of the original and Hungarian results

The results of the original, German scale show a slight difference from the Hungarian results. In the German study, the authors distinguished three factors: the first factor „refusal/rejection and the interference in someone's private sphere", and the „altruistic and helpful" (F2) are identical, but they identified a third group somewhere between the two (F1 and F2) factors. This third group is interested in the problems of other groups (less advantaged) of society but their contribution ends by donating.

5.1.6 Environmental compatibility and responsibility

Under environmental responsibility we refer to the relationship an individual has towards nature, his/her feelings of responsibility for it and the resulting behaviour. Why is it so difficult to behave in an environmentally responsible way if we want to keep all our needs and desires as well as our positions in society? One reason may be a low level of self-esteem and its consequences such as relying on coping strategies and feeling insecure. Insecurity occurs if intrinsic motivation is missing (Deci 1975). One of the main questions of the research carried out by Neuner et al. (1998) on „postmaterial and promaterial lifestyles' was to investigate what factors may influence and support environmentally responsible behaviour. For measuring environmental responsibility the authors incorporated the findings of earlier research done in the field and used as orientation when developing the scale. One of these works was the Ecology Scale developed by Maloney and Ward (1973, 1975). At the same time, it was important to include measures on emotions, attitudes and behaviour as well, therefore some Schahn and Holzer findings (1988) were included in the scale too, mainly covering environmentally friendly purchasing.

In the validation, the original items were supplemented with additional items based on the work of Kuckartz (2000, 2006) and Preisendörfer (1998). Respondents had a high agreement with many items but in almost all cases these statements did not relate to individual responsibility but to society in general and emphasise the role of the government in protecting the environment or the rights of future generations. By contrast, values measured in case of individual responsibility were significantly lower.

Items	Mean	Std
I think we should not buy the products of those companies whose activities have proven to be harmful to the environment even if we have to abstain from things for that.	4,0	1,5
I do not want to change my current cleansing and washing materials because others are better for the environment.	2,4	1,4
I think we have to leave all extra and useless packaging at the store and should not take them home (e.g. shoe boxes).	3,7	1,7
Mineral water should be sold in the future only in refundable glasses.	3,9	1,7
I am glad soft drinks are available in cans and plastic bottles if I travel and organise a picnic.	3,2	1,5
It is frightening to see how many products that are harmful for the environment, are still available on the shelves in supermarkets.	4,4	1,5
If I do shopping I do not want to worry unnecessarily whether any of the products is harmful to the environment.	3,2	1,4
I am irritated by those who buy a lot of things in tins and plastic bags at the supermarkets.	3,0	1,5
I mostly buy soft drinks and beers in refundable glasses/bottles.	3,0	1,6
I rather prefer to get plastic bags when I do shopping than carrying bags with me.	2,8	1,7
I did research to find out which cleaning and washing materials are environmental friendly and I prefer to buy those.	2,1	1,3
I always pay attention to buy those DIY, hobby or gardening products that have one of the known environmental labels.	2,5	1,4
I would pay more for electricity if I knew it comes from renewable energy sources.	3,2	1,5
If I need batteries I always buy rechargeable ones.	4,2	1,7
Growth has limits that has already been reached in the industrialised world or will soon be achieved.	4,4	1,5
Environmental measures and interventions have to be introduced even if it will cut jobs.	3,8	1,4
Science and technology will solve most of the environmental problems without requesting changes in our lifestyles.	2,7	1,5
If we continue our current way of living, it will lead to environmental catastrophes.	4,6	1,4
It makes me worried if I think about in what environmental conditions my children and grandchildren will have to live.	4,3	1,5
If I see a program on TV or read an article about environmental problems, I often get angry.	3,5	1,5
Politician still do not do enough for the environment.	4,8	1,2
Environmental problems are exaggerated by environmentalists nowadays.	2,7	1,4
We should not use more of the natural resources than the level of reproduction.	4,6	1,3
There should be justice between the generations, we should not overexploit nature and endanger future generations.	4,8	1,2
There should be fair trade between rich, developed and developing countries.	4,7	1,2
The treasure and uniqueness of the landscapes of a country should be preserved and protected.	5,5	0,9
In national parks and nature conservation areas there should be designated places that should not be accessed and used by people.	4,3	1,4
If there will be more nature protection interventions and measures, people will not be allowed to do anything.	2,4	1,3
Due to anthropogenic reasons the number of extreme flooding will increase considerably.	4,1	1,4

Table 12. Statistics of answers given for the environmental responsibility scale

Cronbach's alpha for measuring the internal consistency of the environmental responsibility scale was 0.798. Based on the Kaiser criterion (principal component analyses with VARIMAX rotation) 3 factors have been developed, the total variance explained by the factors was 45.8% for the 29 items. The eigenvalue and variance values are listed in Table 12.

Factor	Eigenvalue	Variance (%)	
		Per factor	Cumulative
1	5,0	17,1	17,1
2	4,9	16,9	34,0
3	3,4	11,8	45,8

Table 13. Factor analysis of the environmental responsibility scale

In this dimension we can distinguish three different factors. The first group can be described as „worried about the environment" (F1), who look with anxiety at the degradation of the environment but do not act against it and do not think about the responsibility on the individual level.

The second group can be called "active in solving environmental problems" (F2). People belonging to this group are less worried and look at environmental problems in a more optimistic way; they are active or at least conscious and aware of individual responsibility.

The third group „rejects environmental problems" (F3) who are neither worried about environmental degradation or pollution nor active in solving those. On the contrary, they even behave in a non-environmental way and reject any kind of environmental initiatives.

		F1	F2	F3
Q15	Growth has limits that has already been reached in the industrialised world or will soon be achieved.	**0,456**	0,253	-0,345
Q18	If we continue our current way of living, it will lead to environmental catastrophes	**0,716**	0,385	-0,150
Q19	It makes me worried if I think about in what environmental conditions my children and grandchildren will have to live.	**0,801**	0,312	-0,126
Q20	If I see a program on TV or read an article about environmental problems, I often get angry.	**0,530**	0,290	0,162
Q21	Politician still do not do enough for the environment.	**0,364**	0,104	-0,353
Q23	We should not use more of the natural resources than the level of reproduction.	**0,704**	0,015	-0,057
Q24	There should be justice between the generations, we should not overexploit nature and endanger future generations.	**0,761**	0,191	-0,203
Q25	There should be fair trade between rich, developed and developing countries.	**0,590**	0,253	-0,123
Q26	The treasure and uniqueness of the landscapes of a country should be preserved and protected.	**0,660**	0,206	-0,180
Q29	Due to anthropogenic reasons the number of extreme flooding will increase considerably.	**0,632**	0,059	0,019
Q1	I think we should not buy the products of those companies whose activities have proven to be harmful to the environment even if we have to abstain from things for that.	0,410	**0,642**	-0,125
Q3	I think we have to leave all extra and useless packaging at the store and should not take them home (e.g. shoe boxes).	-0,028	**0,512**	-0,168
Q4	Mineral water should be sold in the future only in refundable glasses.	0,234	**0,614**	-0,435
Q6	It is frightening to see how many products that are harmful for the environment, are still available on the shelves in supermarkets.	0,251	**0,609**	-0,345
Q8	I am irritated by those who buy a lot of things in tins and plastic bags at the supermarkets.	0,123	**0,641**	-0,273
Q9	I mostly buy soft drinks and beers in refundable glasses/bottles.	0,063	**0,742**	-0,129
Q11	I did research to find out which cleaning and washing materials are environmental friendly and I prefer to buy those.	0,219	**0,588**	0,124
Q12	I always pay attention to buy those DIY, hobby or gardening products that have one of the known environmental labels.	0,285	**0,577**	0,020
Q13	I would pay more for electricity if I knew it comes from renewable energy sources.	0,236	**0,674**	-0,155
Q14	If I need batteries I always buy rechargeable ones	0,021	**0,504**	0,045
Q16	Environmental measures and interventions have to be introduced even if it will cut jobs	0,166	**0,486**	-0,148
Q27	In national parks and nature conservation areas there should be designated places that should not be accessed and used by people.	0,246	**0,398**	-0,180
Q2	I do not want to change my current cleansing and washing materials because others are better for the environment.	-0,156	-0,201	**0,670**
Q5	I am glad soft drinks are available in cans and plastic bottles if I travel and organise a picnic.	-0,006	-0,046	**0,492**
Q7	If I do shopping I do not want to worry unnecessarily whether any of the products is harmful to the environment.	-0,124	-0,287	**0,404**
Q10	I rather prefer to get plastic bags when I do shopping than carrying bags with me.	-0,015	-0,099	**0,718**
Q17	Science and technology will solve most of the environmental problems without requesting changes in our lifestyles.	-0,490	0,128	**0,490**
Q22	Environmental problems are exaggerated by environmentalists nowadays.	-0,258	-0,063	**0,574**

| Q28 | If there will be more nature protection interventions and measures, people will not be allowed to do anything. | 0,059 | -0,136 | **0,733** |

Table 14: Factors unveiled for the environmental responsibility scale (varimax rotated)

Comparison of the original and Hungarian results

Both in the original, German and the Hungarian study 3 different groups could be identified: „worried about the environment" (F1), „active in solving environmental problems" (F2) and „rejecting environmental problems" (F3). At the same time, while in the Hungarian case only those belonging to the group „active" (F1) engage in any activity, in the German study also people in the „worried" group show an environmentally conscious behaviour.

5.1.7   Summary

After validating and analysing the scales measuring the different dimensions we tried to answer to what extent our hypotheses are true when examining the relationship between the dimensions. For this reason, we performed a correlation test that resulted in the following:

- Striving for a higher status and position in society shows a high, strong correlation with both groups in the materialism scale.
- This group is less characterized by altruism, social and environmental responsibility.
- The group of "competitors" shows a strong correlation with the "abundance and exclusivity" group and but show negative correlation with those rejecting environmental and social responsibility.
- The "stubborn and inflexible" group is clearly rejecting environmental and social responsibility.

- In the dimension of hedonism and materialism, the "fashion and modernity" group slightly correlates with "rejecting social responsibility".

- It is important to note that those "rejecting environmental responsibility" are also clearly "rejecting social responsibility".

- The "helpful, altruist" group correlates with those "worried about the environment".

	higher status	competi tion	stubborn, inflexible	abundance, inflexible	Fashion, modernity	rejecting, (social)	altruist helpful	worried	active	rejecting (env.)
higher status, position	1,000									
competition	0,000	1,000								
stubborn, inflexible	0,000	0,000	1,000							
abundance, exclusivity	0,439	0,292	-0,119	1,000						
fashion modernity	0,248	-0,055	-0,011	0,000	1,000					
rejecting (social)	-0,062	-0,150	0,342	-0,185	0,163	1,000				
altruist, helpful	-0,234	-0,085	0,087	-0,065	-0,012	0,000	1,000			
worried	-0,168	-0,196	0,113	-0,185	0,026	0,062	0,363	1,000		
active	0,060	0,108	0,004	-0,046	0,081	0,039	0,003	0,000	1,000	
rejecting (environm.)	-0,079	-0,182	0,299	0,023	-0,038	0,437	0,247	0,000	0,000	1,000

Table 15. Correlation, relation between the measured dimensions

The aim of the present empirical phase was the adaptation and validation of the German „postmaterial and promaterial lifestyles" scale. The internal consistency within the scales was high, significant correlations were observed between the measured dimensions: positionality, commodity fixation, environmental and social compatibility. Overall, the results indicated that the adaptation of the original scale was successful; the Hungarian version is a reliable and valid instrument providing a useful methodology for measuring consumers' propensity to socially and environmentally responsible consumption.

The analysis of the different dimensions explored the relationships and correlations between social and environmental responsibility, materialistic and positional attitudes and behaviour

and therefore the negative and positive aspects and nature of different attitudes towards sustainable consumption.

5.2 Measurement of environmentally and socially responsible behaviour of focus group participants

The participants of the focus groups were recruited from a selected high school of Bicske, a mid-size town 35 kms from Budapest, aged 16-19 years, each group consisting of 8-12 participants.[11] Respondents were asked to fill out questionnaires on their value orientations, consumption patterns and lifestyles (using the pro/postmaterialism scale validated and adopted as described in the previous section) After filling in the value orientation questionnaires, a questionnaire using the PANAS Scale (Positive and Negative Affect Scale, Watson and Clark, 1988) was distributed with the request to be filled out before and after watching selected visual materials (2-5 videos maximum per group) in order to measure the effect and change of initial mood and feelings of respondents after watching the videos. The questionnaire was filled out by 74 high-school students. A recall questionnaire was also carried out 2-3 weeks after the group discussions to see if any long-term effects of the discussion/videos could be measured related to cognitive process and the intentions on behaviour change.

Ideas and outcomes of the workshops were anonymized in the analysis of results. According to national regulations (Act CXII of 2011. on information self-determination and freedom of information) and consultation with CEU's Counsellor for data protection and ethical issues, a favourable ethical opinion was sought and found prior to the workshop, and individual and full school consent were given in writing beforehand. Some supervision and attendance of teachers were also offered and a small number of workshops took this opportunity up.

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[11] The participants of these focus group sessions are different from those participating in the envisioning exercises (chapter 4) but the same who evaluated the content and effects of the selected visual materials (described in chapter 6). As value orientations and their measurement are described and discussed in this chapter (chapter 5), therefore the results obtained through this study are reported here.

A self-administered, paper-based questionnaire was used during the focus groups session in Hungarian. The structure of the questionnaire was as follows:

- After the researcher introduced the aim of the research project and the session, focus group participants were handed out the paper based survey. The questionnaire first introduced the aim of the questionnaire and asked for the birth date of the respondent and the date of the session. These data were used later for ensuring anonymity and also the categorization of the respondents' opinions and answers.

- The first section dealt with questions (multiple-choice and open-ended) about the knowledge of students about sustainability and sustainable development, as well as their media content consumption interests. The open-ended question on the understanding and knowledge on sustainable development aimed to explore youngsters' first thoughts and knowledge on sustainability (see questionnaires in Appendix 1).

- The second part of the questionnaire measured consumer behaviour consisting of 23 items, with the use of 6-point Likert scale from "I do not agree" to "I completely agree" and another subset of questions measuring value orientations. The selection of items was based on the validation and adaptation of the scale developed by Reisch and Scherhorn (1998) and included 32 questions.

- As a last question of the general questionnaire on lifestyle segmentation, respondents were asked whether they are a member of a civil society organization.

- After filling in the questionnaire, respondents were asked to evaluate the emotional effects of the videos by using the PANAS scale (using 19 items and a 6-point Likert-scale, PA and NA are polar sides of a single dimension that are either positive or negative emotions) as well as provide their opinion regarding the content and

presentation of each of the videos. Results of the video evaluation will be described in the next chapter.

- At the end of the questionnaire two more questions were included on measuring social responsibility and demographic variables.

5.2.1 Findings of the questionnaire among focus group participants

5.2.1.1 Knowledge about sustainability and media content interests

The participants were almost absolutely not interested in politics, social issues and consumer protection – they do not search for such content either on television or on the internet. Environmental and wildlife topics are also not interesting for the age group researched, all topics were ranked at a very low level (´nature and animals` TV programs on thematic channels such as National Geographic had the highest scores within the themes). It means there is a general challenge to raise the awareness and interest of youngsters towards the above mentioned topics (see figure below).

How much are you interested in the following topics (4 points scale)

Topic	Score
Nature and animals - TV	2.15
Nature and animals - online	2.01
Environment - online	1.86
Environment - TV	1.74
Consumer protection - online	1.26
Politics, economics, society - online	1.23
Consumer protection - TV	1.15
Politics, economics, society - TV	1.14
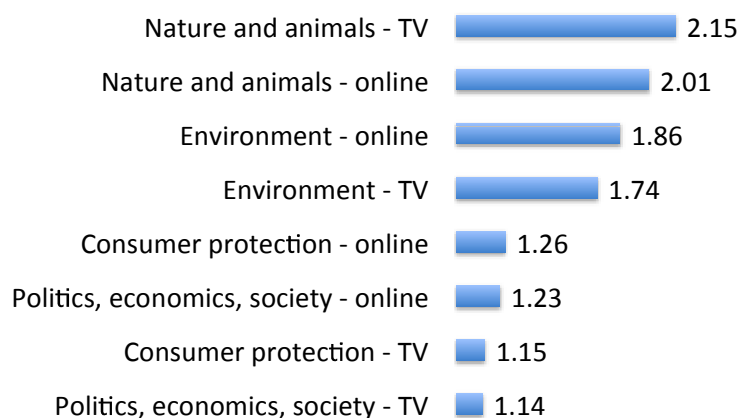
Figure 8: Media consumption interest of focus group participants

In terms of *knowledge about sustainability and sustainable development*, only 42 of the respondents reported they ever heard the term "sustainability" or "sustainable development", and only 22 out of the 42 (who reported to heard about it) respondents could give a roughly accurate definition of sustainable development. This means that less than 30% (22 out of 74) of the participants have an understanding on what sustainability covers. In total, 55 answers were collected on the definition of sustainability from 74 respondents, meaning that 19 participants had absolutely no idea or estimation about the meaning of the term (most of the respondents admitted they were not able to answer the question as they could not relate the term to anything). 24 answers were more or less related to social, environmental or economic issues or themes (or said "something with the environment", "something with people or life quality"); 10 of the answers were less correct in their direction, but estimated that it should be "about keeping current status of something" and 21 of the answers were totally incorrect. As a summary, over 50% of participants had absolutely no idea about or a totally incorrect understanding of sustainability. Some of the wrong answers are listed below:

- *"That I can keep on feeding my family"*
- *"That it does not cost a lot, e.g. a cheap flat"*
- *"It can be continued long"*
- *"If there is a state regulation it has to be kept"*
- *"Something easy to change, we only need to make a decision about it"*
- *"can be saved"*
- *"permanent contact"*
- *"availability, execution"*
- *"permanent contact between two or more people"*
- *"when you are not sure about something"*
- *"is how things work"*

When measuring the knowledge of environmental labelling, results show that 77% of participants are not aware of any sustainability or environmental labels. The rest of the group mentioned WWF and the recycling logo.
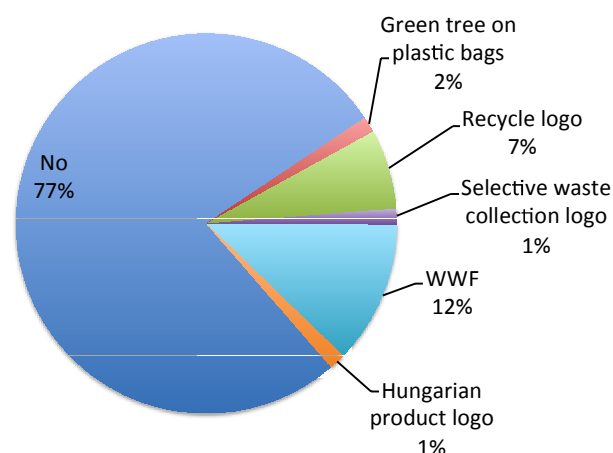
Figure 9: Knowledge on environmental labelling

Respondents were also asked to choose the most appropriate motto reflecting their personality from a list provided (see figure 10). According to the results, only 22% of respondents have claimed that they live in harmony with nature and want to be pioneers or role models for environmental protection. 42% showed a somewhat passive attitude, currently not thinking about any step to make for protecting the environment or to save resources for future demands and generations. One out of four youngsters is putting the responsibility to the government and authorities stating that it is their task to take the necessary steps to curb environmental degradation. This group of youngsters does not believe changes on the individual level can make a difference. The results indicate a very low level of knowledge, interest and understanding of sustainability issues among the target group of the research.
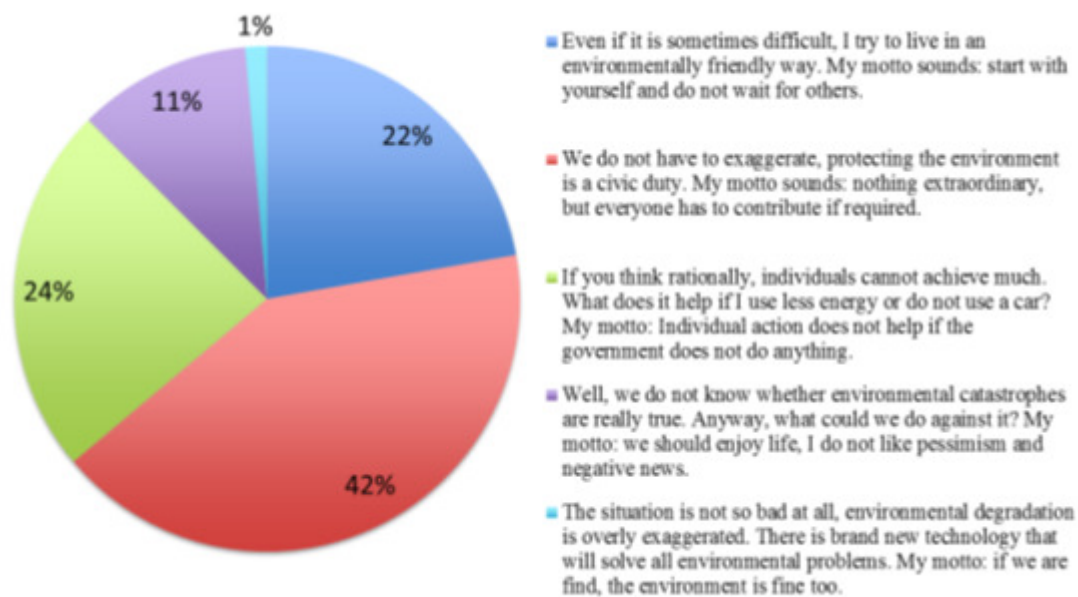
Figure 10: Share of guiding opinions on environmental responsibility

Passivity is visible in the social dimensions as well. Respondents were asked about their potential behaviour in case of two different imaginary situations. The first described a situation about an old lady getting on the bus and looking for a seat (Question asked in the questionnaire: Imagine the following situation – A person of your age is sitting on the bus with bags for a 3-day tour. An older person gets on the bus. What do you think, what would the person of your age do?). The second described a situation about a boy who was attacked by a group (Question asked in the questionnaire: A person at the age of yours witnesses a situation when a group of young people clearly threaten another young man. What do you think, what would the person withnessing the situation do?). Respondents were asked about their response in both cases (see the figures below – figure 11). In both situations half of the respondents would behave in a very passive way rejecting any action to help others in need. In case of the situation with old lady on the bus another 18% think that nothing would happen at all. These rates show that the majority of the participants do not feel individual responsibility or addressed by the situation. Only around 25% would do something actively (alone or in a team) to change a situation that is disadvantageous for other people.

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Situation: old lady gets on the bus	Situation: a group attacks a boy

give up the seat
Looks out the window pretending nothing has happened
Asks an other passanger to give up the seat
Nothing
other

Passes by
Interfere
Passes by and calls the police
Asks others to help him solve the situation
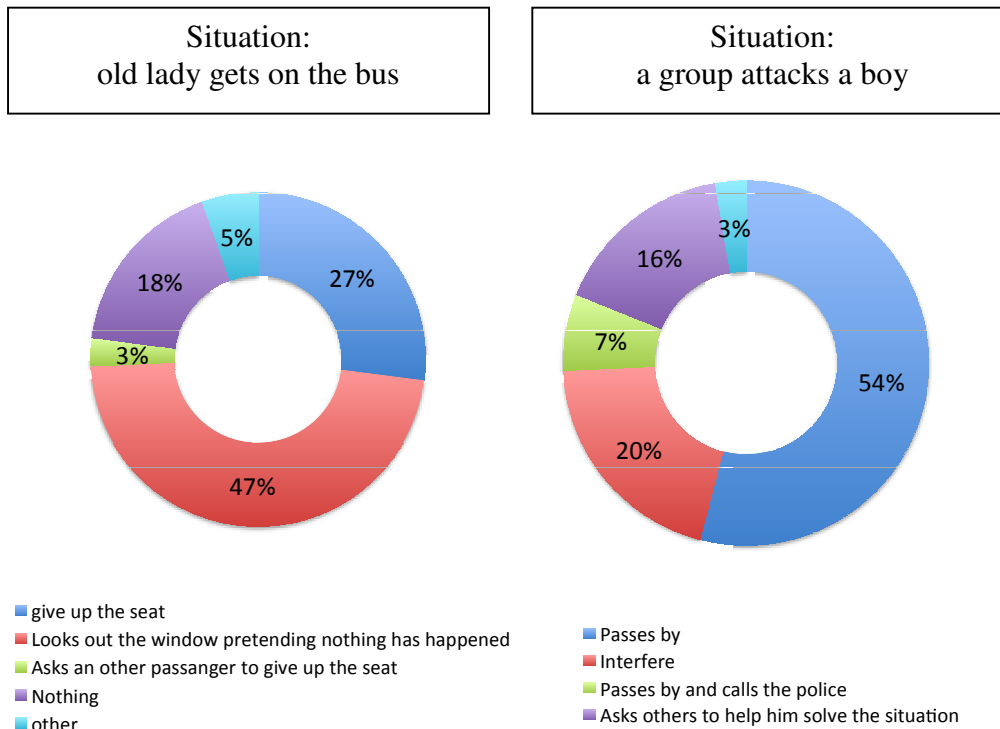
Figure 11: Level of feelings of social responsibility and action in a given situation

While the majority find important to live in a sustainable way and accept its importance, most of the respondents do not understand what sustainable development covers. Sustainability is mainly associated with environmental protection; social, economic and cultural dimensions of the term appear to a marginal extent in students' understanding. Similar results among students have been reported in other countries as well (e.g. Kagawa, 2007, Summers et al., 2004).

5.2.2 Main results on consumer behaviour and consumption patterns

Based on the responses of the questionnaire (using a 6-point Likert scale) investigating the consumption patterns and behaviour of youngsters and their decisions as consumers, findings show that the target group is rather price conscious and price oriented (based on the focus group discussion, this is not only due to their financial dependency, but also due to the financial challenges many of their families are facing, especially since the financial crisis). Youngsters consciously compare prices and look for a good price and quality balance, plan bigger shoppings in advance.

While respondents are very price conscious and pay attention on comparing prices, they also report to prefer buying organic and local products. As the respondents live in an area where many households have their own vegetable garden and are engaged to some extent in family farming (e.g. chicken, pigs and cows), it offers a good opportunity to produce their own food or buy from each other or exchange it.

Consumer behaviour (1-6 scale)

I like trying out the newest products.	4.4
I frequently buy in discounts, like Penny, Lidl or Aldi.	4.3
It is worth to look for information before buying	4.2
I like to compare prices and quality.	4.2
I can do a lot for the environment with my consumption	4.0
Bigger shoppings are always planned before.	4.0
I like to buy organic and local food.	3.9
I always do shopping at the same stores.	3.9
I always buy my favourite brands.	3.8
I prefer to buy fair trade coffee and tea.	3.8
I prefer buying the products of those companies who do	3.8
I am well informed on quality and availability.	3.7
It is important for me to do more for the environment	3.6
When I go shopping, I know how much products should	3.6
People living in rich countries are responsible for people	3.6
Usually I buy the cheapest products.	3.5
Shopping makes me happy.	3.3
I always buy the same brands.	3.2
I do not think much when I go shopping.	3.0
I always shop spontaneously.	2.8
Quality is not the most important factor for me when I	2.4
Sometimes I really like advertisements.	2.0
I only have one life, so I do not want to deal with the	1.9

Figure 12 Consumer behaviour characteristics of focus group participants

On the level of attitudes, the results show that having a "lot of stuff around" is important for the majority of the members of this young target group. The second most ranked item was that they do not want to pollute the environment at the cost of future generations, showing a positive attitude towards (environmental) sustainability. This finding supports well the value-action gap among this generation too, as there is a clear dissonance between youngsters' perception and feeling about the environment and their behavioural determinants (as we will see some more evidence in the later sections of this chapter as well). This finding also highlights the failure of just providing information about environmental issues and sustainability without pointing to the relationship of our actions and their consequences.

attitudes (1-6 scale)

Attitude	Value
I like having lots of stuff	4.8
We may not spoil the environment for future	4.5
Carreer is important for me	4.4
Everything around me should have a style and quality	4.1
Uniqueness is important when shopping	4.0
Future environment and circumstances of living of our	4.0
Its important to enforce my opinion	3.8
I like when people look up on me	3.7
I would pay higher price for electricity if it would come	3.4
We need to be rude sometime to step forward	3.4
I am very ambitious and want to be always better than	3.4
Its important for me to show my succes to others	3.3
I would like to drive a car of my status	3.3
I wont change my mind if ever convinced	3.2
My friends say that I am willfull sometime	3.1
It is how I said	3.0
I buy beer and drinks in refundable bottles	2.9
I need competition to see how good I am	2.9
I like to compete with others	2.9
When I buy or get a new item I dont like to deal with the	2.9
If a new product of my interest is released I have to buy	2.7
I stay in the background when teamworking	2.6
Its important for me to set orders when working	2.6
I dont like if others opinion differ from mine	2.6
If there will be more environmental regulations people	2.5
It does not worth to deal with others problems, we	2.5
I frequently deal with other social groups	2.4
I like to shop after a hard day	2.4
I always feel I need something	2.2
I prefer to get plastic bags instead of bringing one from	2.2
I cant deal with others problems, I have mine	2.0
I am never satisfied with items at my home	1.8

Figure 13Attitude characteristics of focus group participants

The following four segmentations based on these values and attitudes investigated, are trying to provide a clear and easily understandable picture of the target group's attitude and behaviour towards sustainability.

Positionality segments

- Inflexibility 27%
- High status 32%
- Competition 41%
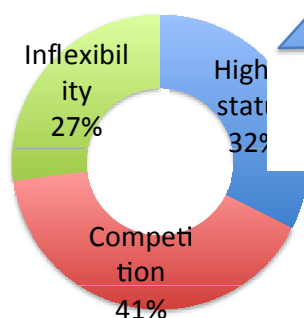
Men are overrepresented in higher status and competition

Social responsibility segments

- Altruist 53%
- Rejector 47%
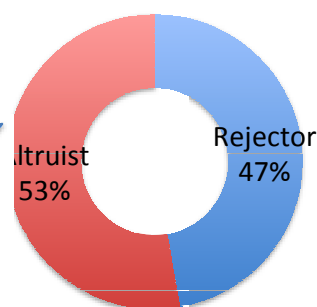
Women: 70%
Men: 29%

Environmental responsibility segments

- Rejector 7%
- Active 13%
- Anxious 80%

Materialistic segments

- Exclusivity, abundance 26%
- Fashion, trend 74%
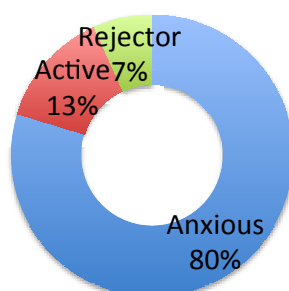
Women are overrepresented in fashion

Figure 14: Share of different segments among the dimensions measured

According to the results of the survey, 32% of respondents belong to the segment "positional behaviour" whose aim is to achieve higher social status that is described by Reisch (1991) and Scherhorn (1988).

The following tables (Tables 16-18) present the average values of the behavioural items and attributes by the members of different segments defined previously. Each table shows the overall average values of all respondents, followed by the values for each segment in columns. According to the value results we can clearly differentiate the target group.

Sometimes self-esteem and life satisfaction is connected to the symbolic values and access to goods and services. *Materialism* can also be expressed in the way we deal with used and old goods. Another dimension of materialism refers to the level of intensity with which we enjoy the act and process of buying. Interestinlgy, those consumers, who enjoy the 'utility' of having exclusivity, luxury products and shopping malls and the main reason for shopping is

enjoyment, scored higher for values like equality, altruism and environmental protection, compared to the "fashion and trend" (74%) segment, that covers the majority of the respondents.

At the *positionality* dimension we can clearly see that the "inflexibility group" (27%) scored lower at multiple values showing their strong passivity. The "competition" segment (41%) scored higher for some values related to environmental issues and also for wealth. The segment of "higher status" (32%) is not interested in or worried about environmental issues and they value more a life full of change and fun.

Social responsibility refers to a behaviour that consciously takes notice of others' needs and actively contributes to the well-being of others in different forms: active engagement (in family or in the neighbourhood or in a community), responsibility, respect for others or stick up for others (e.g. for immigrants or people living in developing countries). The weakest form is donation; the strongest form is devoting our leisure time and activity.

When evaluating the social responsibility dimension we can clearly see the difference of the rejector (47%) and the altruist (53%) groups in their value scorings. Altruists are more open for environmental and social issues and do not treat wealth as important as the rejector segment's members. At the environmental responsibility dimension we cannot see any relevant difference from the average at the anxious group (80%) due to its high coverage of the respondents. The "rejector" segment (7%) scored lower at almost all values except for a stimulating life and influence. In case of the active segment (13%) we can see the importance of being actively engaged in environmental protection and simultaneously the importance of a life full of change as well as their ambition. This segment seems to be more conscious in multiple aspects of life than the average.

	Average	Materialistic		Positionality			Social responsibility		Environmental responsibility		
		Exclusivity, abundance	Fashion, trend	Higher status	Competition	Inflexibility	Rejector	Altruist	Anxious	Active	Rejector
Life full of change	4,2	4,2	4,2	4,5	4,3	3,8	4,2	4,2	4,3	4,5	3,2
Altruism, help	4,3	5,0	4,0	4,2	4,5	4,0	4,2	4,4	4,3	4,3	3,8
Protecting the environment	4,2	4,5	4,1	3,9	4,7	4,0	4,2	4,2	4,2	4,8	3,4
Wealth	4,0	4,2	3,9	4,0	4,4	3,5	4,5	3,5	4,1	3,5	4,0
Fun, amusement	5,1	5,4	5,0	5,5	5,2	4,5	5,2	5,0	5,1	5,2	4,4
Peaceful world	5,3	5,4	5,3	5,3	5,5	5,1	5,1	5,5	5,4	5,7	3,2
Authority	2,5	2,5	2,6	2,7	2,9	1,8	2,8	2,3	2,5	2,6	2,8
Respect Earth	4,5	4,2	4,6	4,7	4,9	3,7	3,9	5,0	4,4	5,2	3,4
Equality	4,6	5,0	4,5	4,8	4,7	4,4	4,1	5,1	4,7	4,5	3,8
Ambition	4,8	4,2	4,8	4,8	5,1	4,2	4,5	5,0	4,8	5,4	3,4
Stimulating life	4,9	4,7	5,0	5,0	4,9	4,9	4,9	5,0	4,9	4,7	6,0
Prevent environmental damage	4,7	5,0	4,6	4,8	4,8	4,3	4,3	5,0	4,8	4,6	3,6
Influence	3,1	3,3	3,0	3,3	3,5	2,2	3,5	2,7	3,0	3,2	4,5
Enjoy life	6,1	6,0	6,1	6,2	6,0	6,0	5,9	6,2	6,1	5,8	5,8
Social justice	4,6	4,9	4,6	5,0	4,6	4,3	4,5	4,7	4,7	4,9	3,4
In accordance with Nature	4,0	3,8	4,0	3,9	4,2	3,7	3,9	4,1	4,1	3,8	2,6
Social influence, force	2,4	2,8	2,2	2,6	2,8	1,4	2,8	2,0	2,4	1,8	2,6

Table 16. The average scoring of values as guiding principles in life by segments

In case of the materialism dimension we can see that the major difference of the two groups can be found in the conscious planning and preparation of bigger shoppings. The exclusivity group (26%) is more spontaneous, while the fashion group (74%) is more conscious.

The positionality dimension's segments are showing more significant differences. The inflexibility segment (27%) is less interested in wider sustainability topics such as the environment, disadvantaged groups of society or people living in less developed countries. At the same time, they are more loyal to their preferred brands (and do not care about price and quality) and regularly prepare a list before shopping. In contrast, the higher status segment (32%) is well informed on prices and quality and also likes to compare the products.

We cannot see significant difference from the average values in case of the "competition" segment and at the social responsibility dimensions. At the environmental responsibility segmentation we can see substantial differences in case of the two smaller groups. The active segment (13%) has scored significantly higher values for environmental and sustainability issues and also seems to be a conscious consumer group. Some of these items are

"It's important to me to do more for the environment than others",

"I prefer products of such companies that do not produce in countries where human rights are not respected" and

"It is worth to get informed before buying an item".

At the same time, they are more flexible and less loyal in case of brands and shops. The rejector group (7%) is the opposite in all mentioned dimensions and scored higher for items like

"I do not think when shopping",

"I live once, so I don't want to deal with next generation's problems" and

"I always buy the same brands".

	Average	Materialistic		Positionality			Social responsibility		Environmental responsibility		
		Exclusivity, abundance	Fashion, trend	Higher status	Competition	Inflexibility	Rejector	Altruist	Anxious	Active	Rejector
People living in rich countries are responsible for people living in poor countries.	3,6	3,4	3,6	3,9	3,5	3,2	3,3	3,7	3,6	3,8	2,6
It is important for me to do more for the environment than others.	3,6	3,4	3,6	3,9	3,6	3,2	3,2	3,9	3,5	4,4	2,6
I can do a lot for the environment with my consumption decisions.	4,0	4,1	3,9	4,3	3,9	3,7	3,6	4,3	4,0	4,4	2,8
I prefer buying the products of those companies who do not produce in countries that violate human rights.	3,8	3,6	3,9	4,1	3,6	3,7	3,4	4,2	3,8	4,3	3,0
I prefer to buy fair trade coffee and tea.	3,8	3,6	3,9	3,9	3,6	4,0	3,7	3,9	3,9	3,7	2,8
I like to buy organic and local food.	3,9	4,2	3,8	3,9	4,2	3,5	3,7	4,2	4,1	4,4	1,6
I frequently buy in discounts, like Penny, Lidl or Aldi.	4,3	4,3	4,3	4,3	4,0	4,6	4,5	4,1	4,2	4,4	4,4
Usually I buy the cheapest products.	3,5	3,4	3,5	3,9	3,3	3,2	3,5	3,4	3,5	3,2	3,0
I do not think much when I go shopping.	3,0	2,8	3,1	2,8	2,9	3,4	3,1	2,9	3,0	2,1	4,4
I only have one life, so I do not want to deal with the problems with future generations.	1,9	1,6	2,0	1,8	1,6	2,4	1,9	1,9	1,9	1,6	3,0
Quality is not the most important factor for me when I go shopping.	2,4	2,5	2,4	2,5	2,3	2,4	2,2	2,6	2,4	2,5	2,4
When I go shopping, I know how much products should cost.	3,6	3,2	3,7	3,8	3,5	3,4	3,4	3,7	3,5	3,5	4,0
I am well informed on quality and availability.	3,7	3,5	3,7	4,2	3,7	3,1	3,6	3,8	3,7	3,9	3,0
I like to compare prices and quality.	4,2	4,4	4,1	4,8	4,2	3,5	4,3	4,0	4,3	3,8	3,2
Bigger shoppings are always planned before.	4,0	2,8	4,4	3,6	3,6	4,8	3,7	4,2	3,8	4,6	4,4
It is worth to look for information before buying something new.	4,2	4,1	4,2	4,4	4,2	3,9	4,2	4,2	4,1	4,7	3,6
I like trying out the newest products.	4,4	4,4	4,4	4,3	4,6	4,1	4,1	4,6	4,3	4,4	4,6
I always shop spontaneously.	2,8	2,5	2,9	2,8	3,0	2,5	2,8	2,8	2,9	2,2	3,0
Shopping makes me happy.	3,3	3,0	3,4	3,4	3,1	3,5	3,0	3,6	3,4	3,0	2,8
Sometimes I really like advertisements.	2,0	2,1	2,0	1,5	2,5	2,0	1,9	2,1	2,1	2,1	1,2
I always buy the same brands.	3,2	3,1	3,3	3,4	3,1	3,3	3,2	3,3	3,2	2,8	4,4
I always buy my favourite brands.	3,8	3,3	4,0	4,1	3,4	4,2	3,8	3,9	4,0	3,0	4,0
I always do shopping at the same stores.	3,9	4,2	3,8	4,2	4,0	3,5	4,0	3,8	4,1	3,0	3,6

Table 17. The average scoring of consumer behaviour items by segments

The analysis of segment level values of general attitude (see Table 18) items was carried out as well. In case of the exclusivity segment the findings show surprising results as the majority of attitude items on materialism were scored lower than expected. We can see such lower values in case of the importance of style, quality and uniqueness of products as well. The results might reflect that youngsters do not show materialistic values due to financial limitations. In case of the higher status (32%) segment we can see higher scores in case of car ownership and also on their openness to pay more for renewable energy sources. The competition segment (41%) scored significantly higher values for all items covering competition and career, while the inflexibility segment's (27%) values are higher for items related to self-confidence. They also do not like to cooperate with others and are less interested in environmental issues.

The social responsibility segments are clearly differentiated by their scorings on items like paying attention to other (more disadvantaged) groups of society, and of future generations. The *environmental segmentation* shows again huge differences for the two smaller segments. The active segment (13%) is more conscious and takes quality and uniqueness and sustainability dimensions also into account when buying products. Parallel, they ranked lower values for the desire and intensity of needs for new products. We can also see that a higher status is also important for the segment as they have scored higher values for car ownership and competition as well. The rejector segment (7%) looks very similar to the inflexibility segment of the positionality dimension: the denial of environmental issues, the lack of cooperative and competitive behaviour and the importance of their own opinion describes the general attitudes of this group.

	Average	Materialistic		Positionality			Social responsibility		Environmental responsibility		
		Exclusivity, abundance	Fashion, trend	Higher status	Competition	Inflexibility	Rejector	Altruist	Anxious	Active	Rejector
I love having a lot of „stuff", e.g. lots of cltohes, sport equipments and devices etc.	4,8	5,1	4,7	5,0	4,8	4,6	4,5	5,1	4,9	4,4	4,6
If there is a new trend or fashion, I do not really like (after a short time) my old stuff anymore.	2,9	2,7	2,9	3,2	2,5	3,0	3,0	2,7	2,8	2,4	4,0
I like to shop after a hard day	2,4	2,3	2,5	2,3	2,4	2,6	2,2	2,6	2,5	2,1	2,0
Everything around me must have a certain niveau and style.	4,1	2,8	4,5	4,4	3,8	4,1	3,7	4,4	4,0	4,6	3,8
Uniqueness is important when shopping	4,0	3,1	4,3	4,1	4,0	3,8	3,6	4,3	3,9	4,5	4,0
I am never satisfied with items at my home	1,8	1,6	1,9	1,8	1,7	2,1	1,8	1,9	1,9	1,5	2,0
I always feel I need something	2,2	2,2	2,3	2,4	2,0	2,4	2,0	2,4	2,4	1,5	2,2
If a new product of my interest is released I have to buy it	2,7	1,7	3,1	3,0	2,3	3,1	2,5	2,9	2,8	2,2	3,2
I like to compete with others	2,9	3,3	2,7	2,8	3,6	1,8	3,2	2,5	2,8	3,7	2,6
Its important for me to show my succes to others	3,3	3,5	3,2	3,5	3,8	2,4	3,5	3,1	3,3	3,5	2,8
I enjoy if people pay attention to and look up to me	3,7	3,8	3,7	3,6	4,2	3,0	3,7	3,7	3,8	3,7	3,0
Its important to enforce my opinion	3,8	3,6	3,8	3,8	3,9	3,5	3,7	3,9	3,8	3,9	3,2
I dont like if others opinion differ from mine	2,6	2,6	2,6	2,2	3,1	2,3	2,7	2,4	2,5	2,5	3,4
Carreer is important for me	4,4	4,7	4,3	4,5	4,8	3,7	4,3	4,5	4,5	4,1	3,8
We need to be rude sometime to step forward	3,4	3,2	3,5	3,5	3,5	3,2	3,5	3,4	3,4	3,3	3,8
My friends say that I am willfull sometime	3,1	2,9	3,2	3,4	2,9	3,0	2,9	3,3	3,1	3,7	2,4
Its important for me to set orders when working	2,6	2,7	2,5	3,0	2,6	2,0	2,6	2,6	2,6	2,3	2,4
As far as possible I would always want to drive a car of my status in society	3,3	3,3	3,2	4,3	3,0	2,4	3,2	3,3	3,1	4,0	3,2
I need competition with others to see how good I am	2,9	3,3	2,7	2,3	4,1	1,7	2,9	2,8	2,9	3,2	2,2
I am very ambitious and want to be always better than others	3,4	3,6	3,3	3,0	4,4	2,4	3,4	3,4	3,4	3,5	2,8
What I said once, should not be changed.	3,0	2,7	3,2	2,7	2,8	3,8	3,0	3,1	3,0	2,8	3,8
If I am convinced o something once, I will not change my opinion.	3,2	2,8	3,3	2,9	2,8	4,1	3,1	3,3	3,1	3,3	4,0
Generally, I think it is not worth to deal with others' problems, we cannot really do anything anyway.	2,5	2,3	2,5	2,3	2,3	3,0	3,3	1,7	2,5	1,7	3,0
I cannot deal with others' problems, I have enogh to deal with in my own life.	2,0	2,1	2,0	1,9	2,1	2,1	2,7	1,4	2,1	1,7	2,2
I regularly help the 'outsiders' of society (eg. Immigrants, refugees, disabled people, the elderly and other disadvantaged).	2,4	2,4	2,4	2,5	2,5	2,2	1,9	3,0	2,6	2,0	1,4
If I work in teams, usually I stay in the background.	2,6	2,1	2,8	2,9	2,0	3,3	2,3	2,9	2,5	2,6	4,0
It makes me worried if I think about in what environmental conditions my children and grandchildren will have to live.	4,0	4,3	3,9	3,8	4,3	3,7	3,4	4,5	4,4	2,6	2,2
We may not damage the environment for future generations	4,5	5,1	4,3	4,3	5,0	4,1	4,2	4,8	4,9	3,2	2,4
I mostly buy softdrinks and beers in refundable glasses/bottles.	2,9	2,4	3,1	2,9	3,1	2,7	2,6	3,2	2,8	4,3	2,0
I would pay more for electricity if I knew it comes from renewable energy sources.	3,4	3,4	3,4	3,9	3,6	2,6	3,1	3,7	3,4	4,6	1,4
I rather prefer to get plastic bags when I do shopping than carrying bags with me.	2,2	2,1	2,2	2,1	1,9	2,7	2,4	2,0	2,2	1,5	3,4
If there will be more nature protection interventions and measures, people will not be allowed to do anything.	2,5	2,1	2,7	2,3	2,6	2,8	2,6	2,4	2,5	2,2	3,2

Table 18. The average scoring of segment level values of general attitude

5.2.3 Summary of results

The results of the survey correspond with and support the assumptions and description about the expected level of knowledge of the target group. The vast majority of young people taking part in the research have a very low level of knowledge, understanding and interest in relation to sustainability. Almost half of the group can be described as absolutely passive and has not considered taking any step for environmental protection or saving resources. Every fourth respondent makes the government responsible for curbing environmental degradation and does not believe in the importance of taking action on the individual level. This passivity is visible in the social dimensions too.

According to the results of the survey measuring the behaviour and consumption patterns of respondents, the target group (partially due to their financial dependency on parents and the economic challenges many Hungarian families are facing especially since the financial crisis) is very price sensitive. To a certain degree as a result of that, most participants consciously compare prices and look for a good price-quality ratio.

On the level of attitudes, the findings support well the value-action gap among this generation too, as there is a clear dissonance between youngsters' perception and feeling about the environment and their behavioural determinants. This finding also highlights the failure of just providing information about environmental issues and sustainability without pointing to the relationship of our actions and their consequences.

The analysis of segment level values of general attitude items show surprising results as the majority of attitude items on materialism were scored lower than expected. The social responsibility segments are clearly differentiated by their scorings on items like paying attention to other members of society, and of future generations. The environmental segmentation shows again huge differences for the two smaller segments. The active segment

(13%) is more conscious and takes quality and uniqueness and sustainability dimensions also into account when buying products and also ranked lower values for the desire and intensity of needs for new products. The group of rejectors (7%) looks very similar to the inflexibility segment of the positionality dimension: the denial of environmental issues, the lack of cooperative and competitive behaviour.

While the majority find it important to live in a sustainable way and accept its importance, most of the respondents do not understand what sustainable development covers. Sustainability is mainly associated with environmental protection; social, economic and cultural dimensions of the term appear to a marginal extent in students' understanding.

6 Evaluation of contemporary sustainability visual materials

In this chapter, the results of focus group discussions and the effects of the different visual materials on viewers are presented and discussed.

The content related selection of the videos was based on the findings of the envisioning workshops in the domains of food, mobility, housing and health additionally. Most videos covered the areas youngsters raised during the vision building exercises, such as healthy food and diet, urban gardening, technological improvements and solutions, importance of local community, local and Hungarian products, alternative travel modes and house building, energy efficiency, different/sufficient lifestyle, less meat consumption, everyday tips and ideas for beauty and wellness (covered under the health and healthy lifestyle domain), ethical leadership and living among others.

As a review and analysis of the coverage of sustainability is an important part of this research (part of objective 2), this section intends to provide insights on this, with a special focus on targeting 'low-interest' viewers. As there is substantial criticism over environmental communication from many perspectives (credibility, salience, relevance etc.) due to commercial interests of many media channels and the call towards them to educate the public and consumers at the same time, the selection of appropriate material for the current study required a thorough search on different media platforms. After the content-related selection was made, a comprehensive search was carried out to find appropriate visual materials on the internet in various styles and formats (approximately 200 visual materials screened). Some of them used the fear-appeal in an emotional and entertaining style (e.g. "mad sausage", see table 19 and Appendix III for the list of videos) or in a factual-argumentative style (e.g. "six degrees"), the ecotainment approach (e.g. the Vegan love story, local community, energy

saving is sexy), a simple speech (e.g. speech of Uruguay's president) or a mixed approach (e.g. Jamie Oliver's TED talk).

For the selection of visual materials, the following sources have been used: websites of the main civil society organisations (both in Hungary and on the international level), YouTube (with specific keywords for content selection), online discussion boards, advertisement agencies. The Association of Conscious Consumers' (TVE – Tudatos Vásárlók Egyesülete) website has a media library covering various domains of sustainable consumption and consumer advocacy collecting visual materials on the international level on different aspects of sustainability. Several of the videos screened and evaluated were listed on TVE's website; some were heavily discussed on the internet and social media sites or produced by students for a sustainable marketing course at a Swiss university (The Vegan Love Story).

As sustainability issues and challenges are global in scope, I included visual material from other countries as well if certain selected and highly relevant topics and their format were not available from Hungarian sources. This also confirms the lack of adequate environmental communication material for the selected target group of the current research. Based on the analytical framework and goal of the research, visual materials were screened, selected and reviewed based on their communication approach and format. These characteristics also give insights on the trends of currently available and used materials on the functions of these communications and the norms on how sustainability issues are presented.

Based on the review and selection process, the lack of adequate visual media coverage of the different sustainability issues identified by youngsters was clearly visible, especially in the Hungarian language. Many of the available material were mainly factual-argumentative and sensational, focusing on disaster events, catastrophes and conflicts (pointing to bad ones and good ones), using the fear-appeal. Especially in case of the 'fear and disaster' focused communication, the lack of context of the event and its consequences was visible. The

material was often either too complex or was lacking to show an in-depth understanding (and context) of the issue presented. Another weakness encountered was the poor quality of the way of presenting the respective issue – either the style, the language used or the visual presentation. The aim of the selection process was to find appropriate visual material in most thematic areas prioritized by youngsters that meet the minimum requirements (as introduced in the research framework) in terms of format, style and approach for the present study.

The evaluation of the videos was based on a content analysis of the videos, the focus groups and the emotional responses measured with the PANAS Scale developed by Watson and Clark (1988). To measure the connotative meaning, as a bipolar rating scale with contrasting adjectives at each end, the Semantic Differential is used. The Semantic Differential (SD) – a type of bipolar rating scale – measures connotative meanings, people's reactions to stimulus words and concepts defined with contrasting adjectives at each end of the scale. This scale measures both the direction of a reaction (e.g. good vs. bad) and the intensity of the reaction (slight vs. strong).

The questionnaire contained open-ended questions as well asking respondents about their evaluation of the videos (what they liked and disliked, whether they have seen the videos before) and a short discussion followed each video too.

Table 19 shows key characteristics of the visual material selected in terms of their communication approach, their emotional effect on viewers and their format. The first column "categorisation of communication approach" categorises the films according to their message communicated towards the audience, based on the researcher's evaluation:

- Positive, neutral or negative: the message communicated towards the viewer is either negative making viewer aware of problems and negative tendencies, or positive with

an encouraging and engaging style or neutral without clear positive or negative messages

- Promoting, solution-oriented or fear-appeal: categorization is based on whether the message communicated in the visual material provides any tips or ideas on solutions to be used in consumers' everyday lives or is rather merely focused on describing past, current or future negative consequences of current consumption practices and lifestyles.

The second column, "emotional effect on audience" is based on the viewers' evaluations during the focus group discussions and their measured responses. In case of a "positive" evaluation, viewers' reactions and emotional state (by using the PANAS scale) after watching the respective video were positive, in case of a "neutral" evaluation viewers had neither positive nor negative reactions after watching the video. In case of a "negative" label, viewers felt negative emotions and were disturbed, evaluated the videos negatively.

The third, last column describes the format and style of communication: the video is either factual-argumentative, merely focusing on transmitting information with facts and arguments; or has the ecotainment format where messages are transmitted in an emotional way or last, has a mixed approach.

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Table 29: Categorisation of visual material

Title of short film	Categorisation of communication approach	Emotional effect on audience	Format	Key topics adressed
1. Attractor car test	positive, solution-oriented	positive	Ecotainment	sustainable mobility, electric car, economic aspects
2. Local community vision – CRISP project	positive, solution-oriented	neutral-positive	Ecotainment	sustainable future societies, local consumption and production, communities
3. Speech of the president of Uruguay/Uruguay elnökének csodálatos beszéde	Positive, promoting (solution-oriented)	positive	factual-argumentative (emotional speech)	Growth vs development, equity, happiness, quality of life, sustainable development
4. Cserpes Milk Bar/Cserpes tejivó	neutral, promoting	neutral	factual-argumentative	healthy food, entrepreneurship, food culture, youngsters
5. Energy saving is sexy/Az energiatakarékosság szexi	positive, promoting, solution-oriented	positive	Ecotainment	energy saving, energy efficiency, savings
6. Urban gardening project/Közösségi kert projekt	positive, promoting, solution-oriented	neutral-negative	Ecotainment	urban gardening, local food production
7. Mad sausage	negative, fear-appeal	negative	mixed/emotional	unhealthy food, animal rights
8. Out of threadwheel/Kiszálltak a mókuskerékből	neutral, promoting, solution-oriented	neutral-negative	factual-argumentative	Sufficiency, simple, eco-friendly lifestyle, community
9. Six degrees could change the world	negative, fear-appeal	negative	factual-argumentative	climate change

10. Straw bale building/Szalmabála építészet	neutral, promoting, solution-oriented	neutral	factual-argumentative	sustainable buildings, natural material, health, locally available building material
11. And what is in your basket?/És a te szatyrodban mi van?	positive, promoting, solution-oriented	neutral	ecotainment	sustainable consumption and production of fruits and vegetables, local food, entrepreneurship, sustainable agriculture
12. The city on bikes/A város lekerekítve – teaser 2 Tamás	neutral-positive, promoting, solution-oriented	neutral	mixed	sustainable mobility, biking, mobility culture, health and economic aspects
13. The city on bikes/A város lekerekítve – teaser 1 Bori	neutral-positive, promoting, solution-oriented	neutral	ecotainment	sustainable mobility, biking, mobility culture, health and economic aspects, healthy food, entrepreneurship
14. Watch your day in 2020	Positive, promoting	negative	mixed	technological innovation, high-tech sustainable future
15. Vegan love story	positive, promoting, solution-oriented	positive	ecotainment	animal rights, food culture
16. Jamie's food revolution	positive, promoting, solution-oriented	positive	mixed versions	healthy food, food culture
17. The real bears	negative, fear-appeal	negative	factual-argumentative	food, (un)healthy food, sugar consumption, soda and sugary drinks
18. How to be a cool woman? Home-made natural shampoo/Hogyan legyek jó nő? Házi sampon	positive, promoting, solution-oriented	positive	mixed	health, personal care, chemical-free products
19. How to be a cool woman? Home-made cleaning material/Hogyan legyek jó nő? Takarítás	positive, promoting, solution-oriented	positive	mixed	health, personal care, chemical-free products

Table 20 shows the ranking of visual materials according to the highest emotional effects measured among participants for the visual materials seen and discussed. The table shows the biggest increase among positive (red) and negative (blue) emotions.

Table 30: Ranking of visual material according to the highest emotional effects measured among participants

Emotions	Biggest increase of emotions (highest emotional change effect)		Biggest decrease of emotions	
Determined	1,00	16B. Jamie Oliver	-1,63	15. Vegan love story
Active	1,01	3. Speech of the president of Uruguay	-1,44	10. Straw bale building
Hopeful	1,71	16C. Jamie Oliver	-1,44	16A. Jamie Oliver
Proud	1,00	19. How to be a cool woman - home made cleaning material	-1,11	16A. Jamie Oliver
Alert	1,38	7. Mad sausage	-1,56	10. Straw bale building
Interested	0,73	3. Speech of the president of Uruguay	-1,33	2. Local community vision
Attentive	1,43	3. Speech of the president of Uruguay	-1,00	10. Straw bale building
Inspired	0,90	3. Speech of the president of Uruguay	-1,67	10. Straw bale building
Excited	1,00	2. Local community vision	-2,25	8. Out of the threadwheel
Enthusiastic	0,74	3. Speech of the president of Uruguay	-1,75	8. Out of the threadwheel
Guilty	0,67	16A. Jamie Oliver	-1,00	15. Vegan love story
Afraid	1,67	16A. Jamie Oliver	-1,44	11. And what is in your basket
Irritable	1,29	16C. Jamie Oliver	-1,67	2. Local community vision
Jittery	0,88	7. Mad sausage	-1,11	11. And what is in your basket
Hopeless	0,62	9. Six degrees	-0,75	15. Vegan love story
Distressed	3,22	16A. Jamie Oliver	-3,88	19. How to be a cool woman - home made cleaning material
Upset	1,69	3. Speech of the president of Uruguay	-2,00	2. Local community vision
Hostile	0,75	7. Mad sausage	-0,37	4. Cserpes milk bar

Based on the results, we can see that the strongest emotional effect was measured for those videos where a credible, passionate and inspirational character – evaluated as such by both focus group participants and the researcher itself – was seen communicating about the respective topic of the visual material, namely the challenges and the relationship between economic growth, human well-being, and the achievement of a sustainable future. Jamie Oliver and José Mujica (the president of Urugay between 2010 and 2015) are the two most influential characters. Although Mujica was unknown for all young participants before watching the videos and the style of presentation was also somewhat 'disappointing' for them initially (as it has the format of a speech at the Rio+20 Summit of Sustainable Development), they quickly became interested and felt extraordinarily inspired and touched. Youngsters felt the most interested, attentive, inspired and enthusiastic after watching Mujica's speech, and also the most upset. The speech made the youngsters upset about the challenges caused by the growth-centered political agenda. At the same time, his inspirational character, the credibility of his message – and standing as politician – made youngsters feel engaged and enthused "with the leadership of such politicians able to achieve change".

Jamie Oliver was well-known among all youngsters and his TED talk managed (all three versions) to activate youngsters' feelings and perceptions of unhealthy eating habits of children and youngsters and the importance of moving these in a healthier direction. The conseqences and dangers of eating in an unhealthy way made participants guilty, afraid and distressed and less hopeful or proud (version A, without building up the personal relevance and imperative framing). The longest version (version B), where Jamie Oliver talks about the ability of kids to learn how to cook and its life-long advantage (even to "survive of any kind of a disaster") made viewers feel determined, which points to the effect of the message with a 'personal relevance' and imperative.

Another video with stronger emotional effects (increase) is the 'Mad sausage' video, which uses the fear-and-threat approach. Almost all participants felt jittery, hostile and irritable after watching it.

The "straw bale building" and the "out of the threadwheel" videos both caused a decrease of positive feelings among participants, generating passivity and a decrease of interest generally.

Interestingly, most of these videos were either factual-argumentative or used a mixed approach. The only ecotainment video able to decrease negative feelings (guilty and hopeless) was the "vegan love story" and the video using a mixed approach, the "local community" (irritable, upset). These two also generated an increase of the feelings of being determined and interested.

The next table (Table 21) shows the detailed results of emotional effects for each video that was selected and investigated in the current research.

Table 21: Overview of emotional effects of the selected videos

	1. Attraktor car test	2. Local community vision	3. Speech of the president of Uruguay	4. Cserpes milk bar	5. Energy saving is sexy	6. Urban gardening	7. Mad sausage	8. Out of the threadwheel	9. Six degrees	10. Straw bale building
Distressed	-0,08	-3,17	2,63	-1,50	0,72	-0,89	2,13	0,75	2,99	-0,33
Active	0,52	-0,83	1,01	-0,81	0,57	-0,25	1,00	-0,88	-1,00	-1,44
Hopeful	-0,21	0,33	0,12	-0,28	-0,73	0,51	-0,13	-0,50	-0,88	-0,11
Upset	0,04	-2,00	1,69	-0,47	0,25	-0,17	1,13	-0,25	1,37	-0,11
Proud	-0,71	-0,17	-0,38	-0,27	-0,05	0,65	0,13	-0,38	-1,01	-0,56
Alert	0,21	-1,33	1,20	-0,54	0,69	-0,33	1,38	-0,13	-0,63	-1,56
Hostile	0,04	0,17	0,22	-0,37	0,00	-0,27	0,75	0,25	0,38	0,00
Determined	-0,06	-1,50	0,57	-0,57	-0,86	0,15	-0,38	-1,00	-0,38	0,67
Interested	0,49	-1,33	0,73	-0,91	0,04	-0,22	-0,13	-0,75	-0,63	-1,00
Attentive	-0,03	-0,50	1,43	-0,78	-0,06	-0,22	0,00	-0,50	-0,26	-1,00
Guilty	0,01	-0,67	0,33	-0,16	-0,10	-0,22	0,00	-0,13	0,25	0,11
Affraid	-0,09	-0,67	0,45	-0,19	0,08	-0,37	1,00	-0,38	1,50	0,11
Irritable	-0,05	-1,67	1,05	-0,09	0,28	-0,30	0,25	0,13	1,25	-0,33
Inspired	0,48	-1,50	0,90	-0,46	0,53	-0,14	-0,13	-1,50	-0,38	-1,67
Excited	0,41	1,00	-1,37	-0,12	0,93	0,00	-0,63	-2,25	-1,38	-1,33
Enthusiastic	-0,03	-1,00	0,74	-0,44	-0,20	0,16	0,13	-1,75	-0,88	-0,89
Jittery	-0,02	-0,33	0,06	0,11	0,54	-0,48	0,88	0,63	0,87	0,00
Hopeless	-0,05	-0,67	0,47	-0,15	0,52	-0,14	0,13	-0,13	0,62	-0,44

	11. And what is in your basket	12-13. The city on bikes	14. Watch your day	15. Vegan love story	16A. Jamie Oliver	16B. Jamie Oliver	16C. Jamie Oliver	17. The real bears	18. How to be a cool woman - shampoo	19. How to be a cool woman - home made cleaning material
Distressed	-2,00	-2,79	-0,30	-1,51	3,22	0,00	3,14	0,64	-1,00	-3,88
Active	0,44	-0,45	0,10	0,00	0,44	-0,10	-0,14	0,17	0,46	-0,25
Hopeful	0,11	0,27	0,50	0,63	-1,44	0,30	1,71	-0,34	0,39	0,00
Upset	-0,22	-0,51	-0,20	-0,50	1,33	0,20	1,43	-0,69	-0,34	-1,00
Proud	0,11	0,96	-0,10	0,13	-1,11	0,60	-0,43	-0,32	-0,39	1,00
Alert	-0,22	-0,90	-0,30	0,13	0,33	0,50	-0,29	-0,24	0,27	-0,38
Hostile	-0,33	-0,21	0,00	0,00	0,56	0,20	0,00	0,02	0,02	-0,13
Determined	0,78	0,13	0,30	-1,63	0,33	1,00	0,70	-0,22	0,05	0,50
Interested	-0,44	-0,57	-0,40	-0,38	-0,22	-0,10	0,43	-0,31	0,50	-0,25
Attentive	0,32	-0,88	-0,30	0,50	0,00	0,60	0,00	-0,25	0,06	-0,63
Guilty	-0,11	-0,37	0,00	-1,00	0,67	0,20	0,00	0,11	-0,25	-0,50
Afraid	-1,44	-0,86	0,10	-0,25	1,67	-0,30	0,00	0,53	-0,38	-0,88
Irritable	-0,33	-0,43	-0,10	0,25	0,89	0,20	1,29	-0,03	-0,26	-1,25
Inspired	-0,13	-0,51	0,10	0,13	-0,67	-0,50	-0,29	-0,08	0,41	-0,63
Excited	0,33	-0,48	-0,50	0,13	-1,44	0,20	-1,57	0,25	0,50	0,63
Enthusiastic	0,33	-0,29	-0,60	0,37	-0,78	0,50	0,14	-0,05	0,34	0,00
Jittery	-1,11	-0,21	0,00	-1,01	0,00	0,00	-0,29	0,00	-0,55	-0,25
Hopeless	-0,33	-0,29	0,10	-0,75	0,00	0,10	0,29	0,17	-0,31	-0,75

Table 22 (the most positive and most negative evaluation) and Table 23 (detailed evaluation for each adjective describing each video) show how participants evaluated the screened videos. For the evaluation, participants indicated on a 6-point Likert scale with the use of list of bipolar adjectives (Appendix I and the table below) how they found the respective video. The values shown in the table, e.g. in the first line in the column "most positive" mean "activating" and the number for the most negative means "soporific".

Based on the table 23, we can clearly see that the most positive evaluation can either be found in the case of ecotainment videos (e.g. energy saving is sexy, attractor car test, the local community vision), or in cases where the video had an inspiring character communicating to the audience (e.g. Jamie Oliver and José Mujica).

The clearly most negatively evaluated video was the "straw bale building" presenting how to build up a straw bale house and its advantageous characteristics both for the individual and for the environment, by applying a factual-argumentative communication format. Other videos receiving a more negative evaluation were also mainly from the factual-argumentative materials or those that apply the fear-and threat approach.

Table 22: Negative/positive evaluation of the visual material watched by participants (most positive evaluation/most negative evaluation)

Likert scale 1-6	Most negative evaluation		Most positive evaluation	
Soporific, disengaging/activating	2,33	10. Straw bale building	4,15	3. Speech of the president of Uruguay
credible/not credible	1,50	2. Local community vision	4,57	19. How to be a cool woman - home made cleaning material
confusing/clear	4,25	8. Out of the threadwheel	5,67	2. Local community vision
too simple/sophisticated	2,11	10. Straw bale building	4,1	14. Watch your day
bad/good	3,11	10. Straw bale building	4,57	16C. Jamie Oliver
ill tempered/good tempered	1,38	9. Six degrees	4,33	2. Local community vision
over-serious/fun	1,48	3. Speech of the president of Uruguay	5,22	5. Energy saving is sexy
slow/fast	2,67	10. Straw bale building	5,29	16C. Jamie Oliver
outdated/modern	2,00	10. Straw bale building	4,58	1. Attraktor car test
unpleasant/pleasant	3,50	7. Mad sausage	5,46	3. Speech of the president of Uruguay
not appealing/appealing	3,50	2. Local community vision	5,44	16A. Jamie Oliver
not interesting/interesting	4,00	10. Straw bale building	5,78	16A. Jamie Oliver
soporific/exciting	3,22	10. Straw bale building	5,25	7. Mad sausage
sad/happy	0,63	7. Mad sausage	4,45	1. Attraktor car test

Table 23: Overview of the evaluation of the selected visual material by participants

Likert scale (1-6) (e.g. 1 soporific -2-3-4-5- activating 6)	1. Attraktor car test	2. Local community vision	3. Speech of the president of Uruguay	4. Cserpes milk bar	5. Energy saving is sexy	6. Urban gardening	7. Mad sausage	8. Out of the threadw heel	9. Six degrees	10. Straw bale building
Soporific/activating	3,90	3,83	4,15	2,94	4,11	3,96	3,75	3,25	3,50	2,33
not credible/credible	4,40	1,50	4,11	4,13	1,84	4,51	4,38	3,88	3,50	3,22
confusing/clear	5,43	5,67	5,60	5,37	4,63	5,20	5,63	4,25	4,63	4,44
too simple/sophisticated	3,55	4,00	3,82	3,48	3,64	4,04	3,50	3,50	3,88	2,11
bad/good	4,29	4,17	4,45	3,22	4,28	4,15	3,63	3,75	3,50	3,11
ill tempered/good tempered	4,29	4,33	2,23	3,69	4,24	4,07	1,50	3,50	1,38	2,56
over-serious/fun	4,75	5,17	1,48	3,24	5,22	4,50	2,25	2,38	1,50	2,00
slow/fast	4,81	3,67	4,38	3,47	4,84	4,33	5,25	3,38	3,63	2,67
outdated/modern	4,58	4,00	3,79	2,95	4,45	3,79	4,50	3,13	3,63	2,00
unpleasant/pleasant	5,25	5,00	5,46	4,46	4,54	5,05	3,50	4,63	4,25	3,89
not appealing/appealing	3,86	3,50	4,93	3,61	3,94	4,69	5,00	3,63	4,50	3,56
not interesting/interesting	4,55	4,33	5,42	4,46	4,29	4,86	5,63	5,13	5,13	4,00
boring/exciting	4,69	4,83	5,17	4,15	5,21	4,60	5,25	4,13	4,50	3,22
sad/happy	4,45	4,00	1,33	3,42	4,00	4,11	0,63	3,13	1,13	2,89

	11. And what is in your basket	12-13. The city on bikes	14. Watch your day	15. Vegan love story	16A. Jamie Oliver	16B. Jamie Oliver	16C. Jamie Oliver	17. The real bears	18. How to be a cool woman - shampoo	19. How to be a cool woman - home made cleaning material
soporific/activating	3,22	3,27	3,40	3,63	3,89	3,40	4,14	3,81	4,01	3,86
not credible/credible	3,78	4,23	2,00	3,13	4,56	4,50	4,43	3,61	3,96	4,57
confusing/clear	4,56	5,15	5,00	4,75	5,44	5,30	4,86	5,20	5,34	5,43
too simple/sophisticated	2,56	2,85	4,10	2,88	3,78	3,90	3,86	3,29	3,69	3,57
bad/good	3,44	3,64	3,50	4,13	3,89	3,70	4,57	3,84	4,30	4,14
ill tempered/good tempered	2,89	4,27	3,70	3,75	2,38	2,50	2,71	2,85	3,91	4,14
over-serious/fun	3,33	3,02	3,30	4,38	1,56	2,00	2,29	4,16	4,07	4,14
slow/fast	3,78	3,39	3,70	4,50	4,89	4,30	5,29	4,01	4,53	5,00
outdated/modern	2,22	3,88	4,30	3,25	3,89	3,50	4,00	3,60	4,10	3,86
unpleasant/pleasant	4,56	4,46	3,90	5,13	4,78	5,20	5,14	4,60	5,19	5,43
not appealing/appealing	3,67	3,69	3,80	4,25	5,44	4,78	4,86	4,42	4,84	5,14
not interesting/interesting	4,67	4,60	4,90	5,00	5,78	5,10	5,29	4,96	5,09	5,29
boring/exciting	4,11	3,70	4,70	5,00	5,11	4,50	4,86	4,77	5,14	5,14
sad/happy	3,67	3,43	3,90	4,00	1,56	2,20	1,86	2,43	4,17	4,29

CEU eTD Collection

6.1 Inidividual evaluation of the videos

In the following section, for each video two types of charts are provided to visualize the results. The first type provides information on the average difference of ratings on dimensions of the respondents' mood and feelings (using the PANAS scale, Positive Affect and Negative Affect) before and after watching the videos. The PANAS used lists 19 adjectives that consist of two sub-scales: one for positive affect and one for negative affect containing nine and ten items. Participants have to indicate for each item how well the respective item relates to their current mood state and feeling. Each dimension of emotions was measured on a six-point Likert scale (from not at all to very much). The chart shows the average change of all videos investigated and the actual video under analysis. The bigger the difference is between the two lines the bigger effect was measured of the given video for the respective dimension. A one point difference means that the respondents, on average, have evaluated their mood one point lower/higher on a 6 point scale. The maximum change possible is 6 points, but a 0.5 point change as a result of a short video might be evaluated as a strong effect.

Positive emotions: active, interested, inspired, proud, enthusiastic, attentive, alert, hopeful, excited, determined.

Negative emotions: distressed, upset, guilty, afraid, Irritable, hostile, Jittery, scared, hopeless.

The second chart provides information on the evaluation of the content using contrasting items. Each video had to be evaluated on a six-point Likert scale for each dimension covering the simplicity, credibility and 12 other describing variables.

If we take a look at the overall results of evaluation of the videos we can see that in general many of the videos were consideredd as clear, pleasant, appealing and interesting. On the other hand, the strongest reactions – as expected in case of "fear-appealing" videos – were evoked through negative, shocking pictures and content.

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Evaluation of the video – Average of all videos
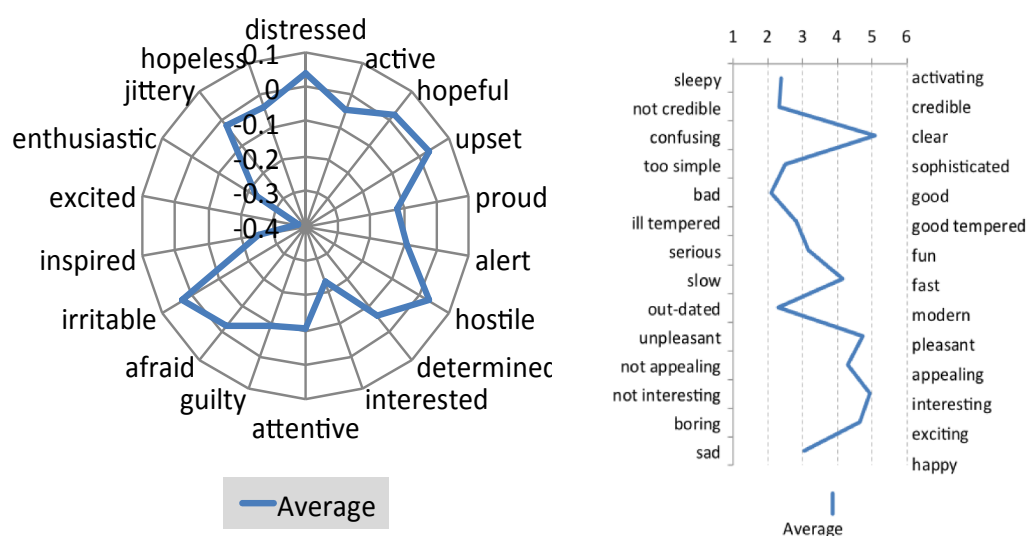
.Figure 15: Average evaluation of all videos

The content analysis shows that we can clearly differentiate the videos based on their format, their communication and emotional approach (see Table 19) as well as on the ratings of respondents about the films´ entertaining and emotional effects. Some of the videos were found rather soporific, less credible and out-dated according to the respondents – mainly those using a factual-argumentative style. At the same time, the majority of the videos were also rated as clear, interesting and pleasant. Trying to summarize the results and the selection of visual materials to be tested, it can be concluded that the available visual material (especially in Hungarian language) covering environmental or sustainability topics mostly deal with an interesting topic but in a less stimulating and entertaining format. It is rather difficult to find visual communication that is well evaluated by younger generations and those less interested in these topics.

In the following subchapters, the selected videos will be evaluated both regarding their content, their evaluation by focus group participants and their emotional effects.

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6.1.1 Video 1 – attraktor car contest

ecotainment, positive effect on audience, solution-oriented

The author/actors: The first video to be evaluated was created by two editors of index.hu, Hungary's largest news portal. Their idea is to present different topics in an entertaining and informal way while providing some understanding of the issues covered as well. As their videos are available on the homepage of the website after publication they get high visibility.

The topic: The selected video is a comparison and contest of an electric car with a petrol fuelled one. The contest is about a journey (with overnight stay) that needs to be managed by two young men as fast as possible by keeping a predefined budget as well. The overall result is that the petrol fuelled car made the contest a few minutes earlier, but its costs were much higher (the driver had to spend the night in the car due to lack of money for a hotel room). But, it is also emphasized that the initial costs of an electric car are much higher and that people are making an "investment for the next generations" when buying one. The style of the video is modern and the contest is presented in a humorous and exciting way.

Figure 16: Car attractor

Respondent's evaluation: This video had a different evaluation than the average. The video managed to activate and inspire its viewers and to make them interested in the topic. Score of alertness have also increased, just like in case of excitement. Feeling proud seemed to decrease after watching the video, and also the feeling of being hopeful decreased slightly that was mainly be related to the fact that at one point of the film it seemed that the electric car might be the winner not only in terms of budget, but also in time. All other emotions remained stable and unchanged.

While respondents evaluated the short film less credible, more outdated and bad tempered than the average, at the same time they found it was funny, fast and pleasant. The biggest difference is visible in the sadness dimension; its value is 1.5 meaning that almost all viewers rated the video very much sad that might be caused by the result and the summarizing sentences at the end of the video about initial costs of investing into an electric car. This is supported by the responses of the discussion held after the video:

"I liked it, they were really funny…. But when will people have money to invest into an electric car?" (Girl)

"Yes, it costs a lot of money and who says petrol will not be cheap again?" (Boy)

The questionnaire also asked open-ended questions about what the viewers liked and disliked in the videos. The most disliked effects were the camera movements (in-car cameras and hand-cameras were used) and that it was too much simple (the actors were driving cars throughout the video). The most liked parameters were the actors, their humour and overall mood just like the cars presented. Both male and female respondents found the video appealing and exciting.

Evaluation of the video - Attraktor
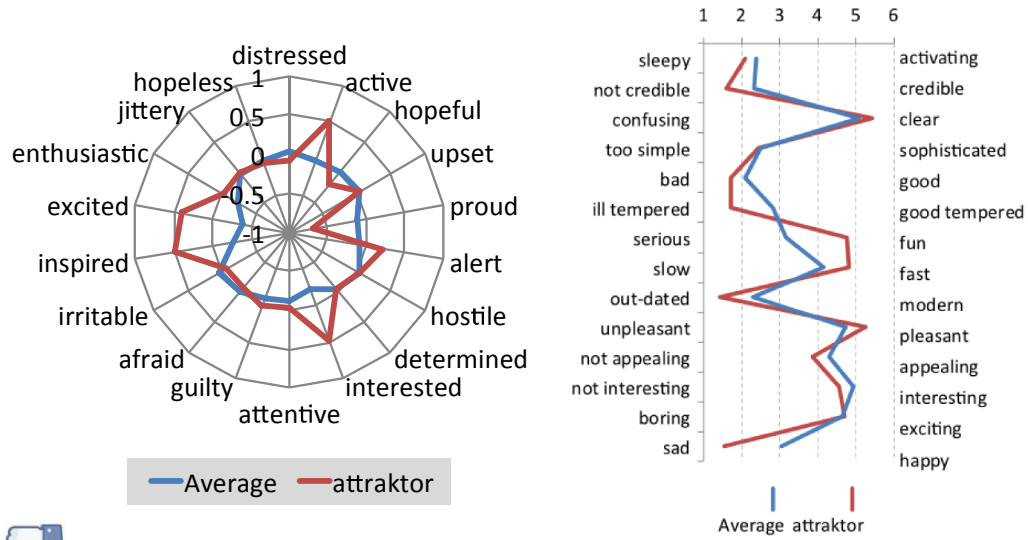
Figure 17: Evaluation of the video "Attraktor"
Active, alert, interested, inspired, excited

6.1.2   Video 2 – Local community vision

Ecotainment, neutral-positive effect on audience, mixed (solution-oriented)

The author/actors: The video (along with two others) was created within the framework of the CRISP (Creating Innovative Sustainability Pathways) project based on the future scenarios drawn by youngsters. The aim was to visualize the ideas and dreams of the participants about a desired sustainable future and to measure its acceptance among other people. The video is an animation designed and produced by Hungarian artists.

The topic: The selected video shows a future scenario where people all over the world are living in harmony and where society is mainly based on local social and economic cooperation and networks. Food and other products are merchandised (bartered) locally; people are helping each other in all aspects of life and are living their life in a close and safe community.

Figure 18: Local community

Respondent's evaluation: This video changed the emotions and the viewers into a rather passive status. Average values of almost all emotions have decreased meaning that the video did not manage to activate the viewers neither in positive, nor in negative directions. Only the emotion "excited" change slightly, but this one was the only emotion where we could measure a positive change of scoring. This was supported during the discussion as well, as many respondents said (after asking them repeatedly about their opinion) after watching the video:

"I do not know what to say… It was OK. Is it really something youngsters said we would live like?"

"I think it is interesting but … mmmmm… is it realistic?

The content analysis shows that the video had a much more positive acceptance than the average. Despite the fact that the video did not manage to activate the viewers to make connections with their everyday lives (the format and style of the video was positively evaluated but it failed to link and relate to everyday activities of viewers) the video itself was more activating than the average.

The video was evaluated to be more sophisticated, clear, good mannered and funny compared to other videos. As the film was about a possible future scenario with an "optimal way of living" it was claimed to be not really credible – the average rating was 1.5 meaning that almost all respondents scored 1 or 2 on the six-point scale. Just like in case of the emotions we can see that the content was evaluated to be less appealing and less interesting compared to other videos. Regarding the format we can see that the video was claimed to be more modern – it was an animation in a "trendy" format that was close the style of the group members.

The open-ended questions of the questionnaire about what the viewers liked and disliked in the videos shows that the most disliked parts of the video were presenting a retrogressive way

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of living with limitations, while the most preferred ones were the modern and kind visualization along with the values presented.

Evaluation of the video - Community
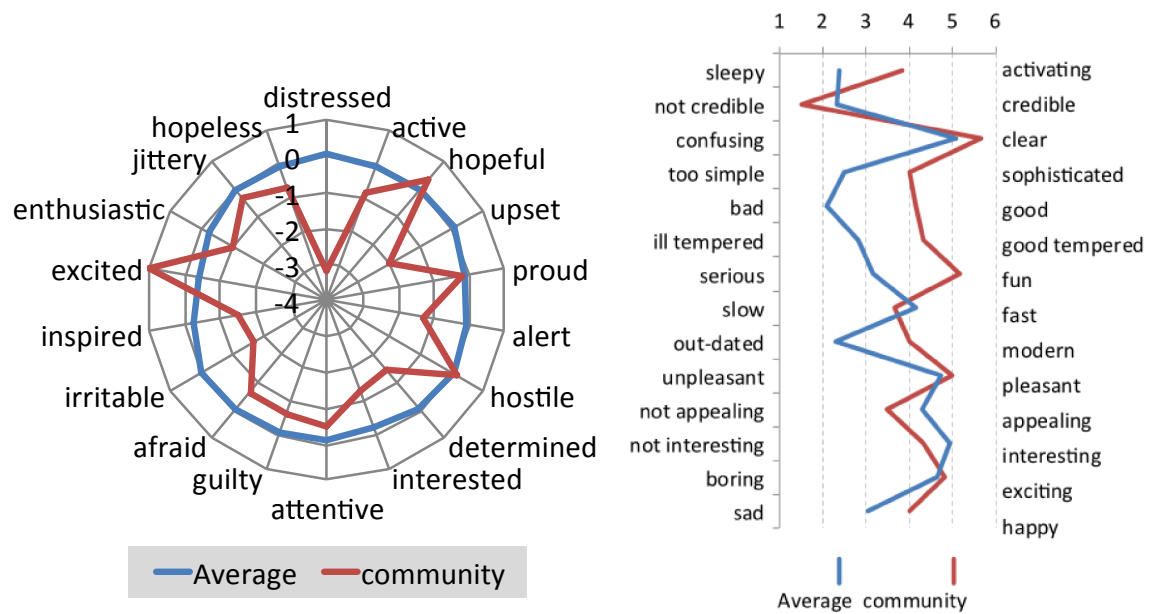
It was like the past, retrogressive

Modern and kind visualization, the values

Figure 19: Evaluation of the video "Community"

6.1.3   Video 3 – the speech of Uruguay's president

Factual-argumentative, positive effect on audience, promoting (solution-oriented)

The author/actors: The video to be evaluated was recorded at the Rio+20 Summit on Sustainable Development opened by UN Secretary General Ban Ki-moon where the president of Uruguay held a speech for an audience of the most important leaders and decision makers of the world. The emotional and inspiring speech was uploaded to YouTube and has been viewed in many countries worldwide and translated into various languages. It gained a high visibility and popularity on social media as well.

The topic: The selected video is an emotionally rich and inspiring speech of Uruguay's president (who lives in a modest milieu, takes part in the production of their own food and donates a large share of his own salary to those living in less advantageous circumstances) about the threats of the future related to sustainability, about the consumer society and our current way of living, and the need to "walk the talk" about the most serious challenge of the human society.

Respondent's evaluation: respondent's evaluation of the video proves that the speech is emotionally very strong – emotions such as distressed, upset, alerted, attentive have been strengthened while watching the video just like almost all other emotions. People watching the video seemed to feel "less comfortable" in their everyday life and most of the viewers felt extremely inspired and hopeful at the same time – we can state based on the results that the speech has managed to activate its viewers strongly. Naturally there should be differences in the way of activation according to the attitudes and behaviour related to environmental and sustainability issues – this is the reason why we can see change in both active (like inspired and alerted) and passive emotions (like upset, afraid, distressed). This polarity was clearly

visible in the comments during the discussion as well. The speech inspired some of the people extremely, leaving a lasting effect on them until the very end of the discussion:

"I think he is really, really great. I wish we would have a president like him." (Boy)

"I have never heard anyone before like him. He is unbelievable and it is so true what he says." (Girl)

"Such a fantastic man! I want to live in the place he lives and I wish, I so much wish to have similar politicians in our country!" (Boy)

Or the opposite side, some participants got extremely frustrated and stressed after watching the video:

"I do not understand what he wants to say. I am really upset about this speech. This made me really angry". (Boy)

The content analysis shows that the speech was evaluated in a positive way in almost all dimensions – there are only two, namely seriousness and sadness where the scores are under the average. Seriousness is related to the event and the speaker of course, while sadness is due to presenting a clear picture of our current lifestyles and a bold future scenario. All other aspects were evaluated to be better than in case of other videos: it was pleasant, interesting, appealing and exciting for the audience – the speech was a kind of "eye opening" material.

The disliked parts of the video were its quality and slow speed and the sadness of the message. The most liked parameters of the video were the person/personality of the speaker, the examples and the values that were presented and that all major problems were compiled and mentioned in a well-organized and easily understandable way.

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Figure 20: Speech of Uruguay's President

Evaluation of the video - Uruguay
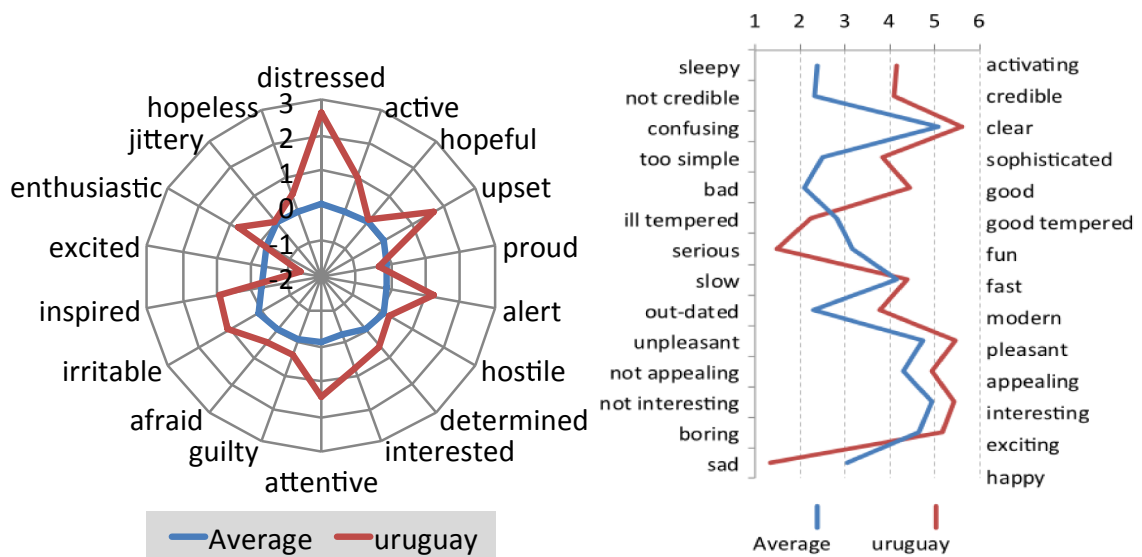
👎 The sad truth, video quality, to fast, not raising the right questions, bored audience

👍 A good compilation of problems, good examples, true, the "actor": a president of a small country, the values, good speech

Figure 21. Evaluation of the video "Uruguay's president speech"

6.1.4 Video 4 – Cserpes milk-bar

Factual-argumentative, neutral effect on audience, promoting (solution-oriented)

The author/actors: The video was part of a regular TV show presenting ideas and tips about healthy living. The selected episode is about a dairy farmer running a "milk-bar" in the heart of Budapest. Neither the owner, nor the brand is famous yet, but the brand is known as a producer of healthy, good quality and tasty milk, yoghurts and other dairy products. The style of the video is more factual and uses moral norms.

The topic: The video is a kind of presentation of the milk-bar in the heart of Budapest and an interview with the owner about current trends in food industry and gastronomy. Past decades (before the political change in the 1990s) is mentioned several times as a period of more healthy food, while current fast-food restaurants and processed, "ready-made" products are claimed to be unhealthy. Teenagers and young people have no experience of the past-times' milk-bars and it is a kind of battle to make them give a try of healthy food.

Respondent's evaluation: respondent's evaluation of the video proves that it was rather slow and boring as most of the emotions were scored with lower values after watching the film. Only jittery was scored with slightly higher scores than before watching the video. Viewers of the film got distressed and lost their interest, and scores of all other emotions were lower by 0.5 points compared to the emotional status of the respondents before watching the film.

The content analysis shows that the video was evaluated more credible and good tempered than other videos on average. At the same time it was less pleasant, less interesting and boring. If we take a look at the rating of the evaluation of the video, the majority evaluated this video between 3 and 4 for almost all attributes, meaning that the film was neutral in the eyes of its viewers.

Many of the participants expressed their surprise and scepticism about someone who does not only talks about bringing quality food to youngsters but made it to its life philosophy and business goal:

"You really trust and believe in this? I cannot imagine this is true." (Boy)

"I cannot believe that someone would really open a milk or sandwich bar especially targeting the youth with healthy food. … Is this a joke? I want to see it!" (Boy)

"I cannot believe someone would open up such a super milk-bar here instead of the ugly cafeteria and buffet we have here… But it would be really nice." (Girls and boys)

The most disliked parts of the video were the overload with explanations and information, its partial point of view towards milk as healthy products and that it was not mentioning its risks and possible diseases. The most liked things about the video were the bar itself with its modern retro style and the fact that it promotes a healthy and traditional food and revival of a good tradition.

Figure 22: Cserpes Milk Bar

Evaluation of the video - Cserpes
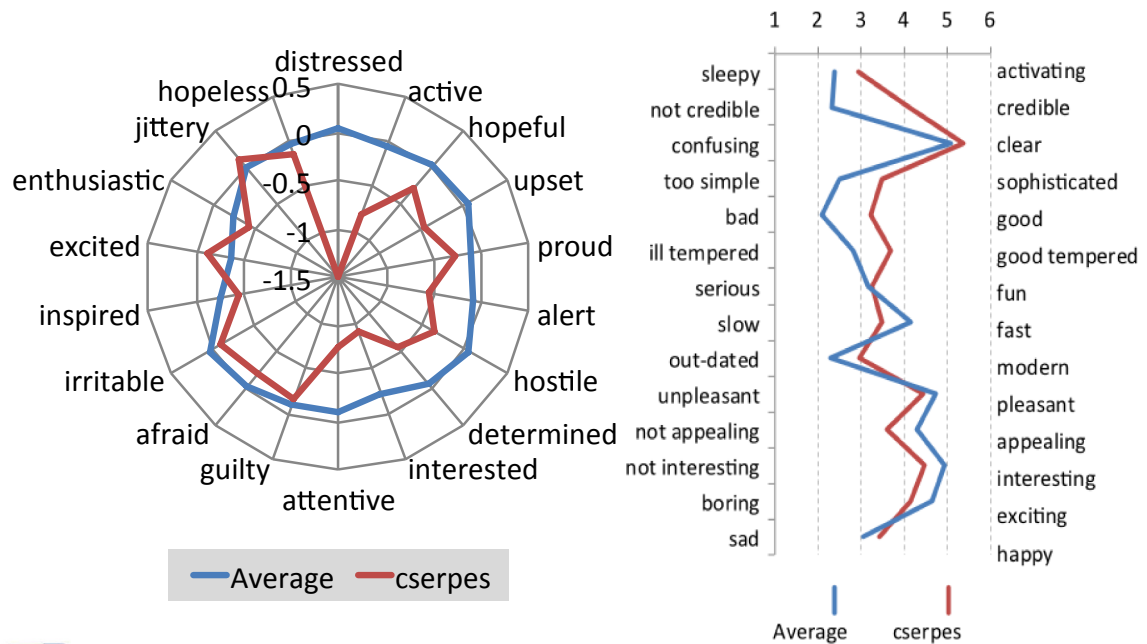
Figure 23. Evaluation of the video "Cserpes milk bar"

6.1.5 Video 5 – Energy saving is sexy

Ecotainment, positive effect on audience, promoting (solution-oriented)

The author/actors: The video was published with Hungarian subtitles by the National Society of Conservationists – Friends of the Earth Hungary with the aim to raise the awareness about a contest about energy efficiency and protecting the environment.

The topic: The video shows a young couple in an apartment after a date in a situation full of sexual hints. The woman is asking the man about the energy saving classification of the flat and household machines and raises his attention to save energy all the time. When the woman realizes that the TV was on standy-by mode during the day the conversion is cut, the date is off and they both agree to call a cab and finish the evening as if this was an unforgivable mistake.

Figure 24: Energy saving is sexy

Respondent's evaluation: respondent's evaluation of the video shows that it managed to activate and alert its viewers who became excited and inspired as well. Emotions like hopeful and determined were scored with lower values than before. The film managed to raise the interest slightly despite the fact that it was totally incredible and artificial. Based on the discussion after the video, participants felt embarrassed and did not know how to express their views and opinion on the film.

The content analysis also shows that the video was activating and funny and also good tempered. Being fast and modern was also scored with higher rates by the respondents compared to other videos. The values for fun and exciting were over 5, meaning that almost everyone rated these dimensions with high scores. The video was appealing and interesting compared to the average score of other videos showed to the respondents.

The most disliked parts of the video were its unrealistic manner and the unhappy end of the story. The behaviour of the girl was evaluated positively and negatively as well by different viewers, while the most liked element of the video were its unusual style and creativity.
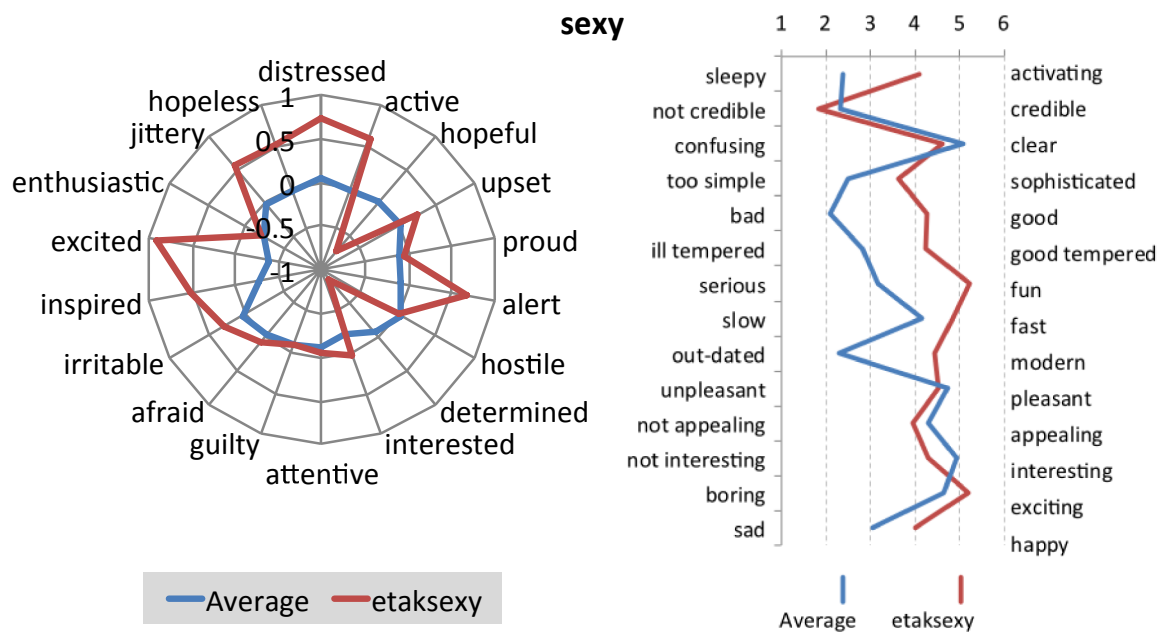
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Evaluation of the video – Energy saving is sexy

Figure 25. Evaluation of the video "Energy saving is sexy"

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6.1.6 Video 6 – Community gardening

Ecotainment, negative effect on audience, promoting (solution oriented approach)

The author/actors: The video was published by the Centre of Contemporary Architecture, an NGO dealing with the revitalization of Budapest throughout projects like the usage of abandoned buildings, the future of small shops and the questions of a modern and social living in big cities. One of their main projects is about gardening in abandoned territories – as these actions are building communities, provide a meaningful use for abandoned buildings/roofs/lands and provide vegetables for the participants/local residents.

The topic: The video presents the first community gardening area (in the downtown) in Budapest where participants work and collaborate (and share) during land work, build boxes, planting tomatoes and herbs etc. The participants in the video tell their story about joining the initiative, how they feel about the community and what are their plans regarding the future. According to the film gardening together is a good way to build a community for people living in Budapest.

Respondent's evaluation: respondent's evaluation of the video shows that community gardening proved to be an activity that raises pride and hope while also eliminating negative emotions such as being afraid or irritable, feeling guilty or distressed. As gardening may not be an interesting activity for leisure for everyone we can see that interest and excitement scores have decreased slightly (it has to be noted that focus group participants live in a mid-sized town 25-35 km from Budapest and in the surrounding villages and towns, many with their own gardens).

Figure 26: Community gardening

The content analysis shows that the video was evaluated more positively in all aspects compared to other videos. Most of the attributes were scored around value 4, meaning slightly over the middle. According to the results the video's message was clear, pleasant and appealing, these attributes were scored with 5 on the six-point scale.

The most disliked part of the video was the music, while the most liked ones were seeing motivated people and happy children and a proof that it is possible to build a happy community and have gardening and self-production as possibly means of food provision even in big cities.

Most participants felt during the discussion that urban gardening projects should be present in cities all over Hungary, at the same time some of the participants were both amused and upset seeing people in flip-flops while doing gardening.

Evaluation of the video – Kozossegi kert

Average —— **kozossegikert**
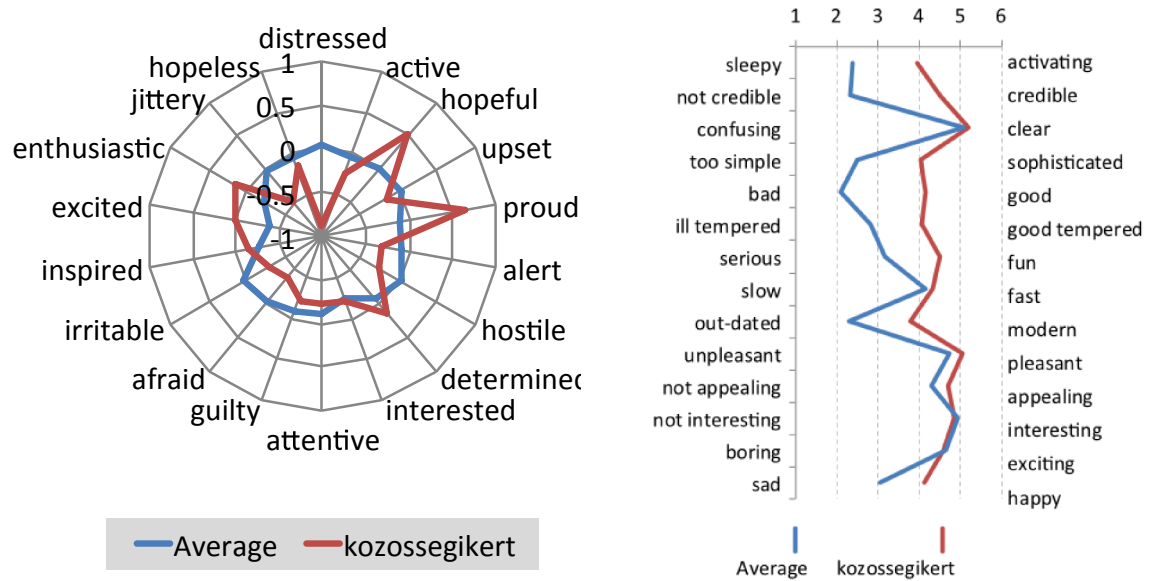
👎 The music

👍 Motivation, children's happiness, happy community, showing that it's "possible"

Figure 27. Evaluation of the video "Community gardening"

6.1.7   Video 7 – Mad sausage

Mixed approach, negative effect on audience, negative and fear-appeal approach

The author/actors: The video was published by Mercy for Animals, an NGO promoting vegetarian food with arguing that the food industry is torturing animals in an extremely brutal way and also using artificial ingredients while producing food.

The topic: The video presents a young man in a fast food restaurant starting to eat a sausage. The sausage starts communicating with the man and tries to convince him not to eat him as the processing of the meat was extremely brutal, thus the result is an unsustainable and unhealthy food. The first part of the video is mainly a speech and interaction between the man and the sausage, while it changes to fast-changing pictures about food processing as the man puts the sausage into his mouth. The video has an entertaining style on the one hand and uses fear and disturbing pictures on the other.

Figure 28: Mad sausage

Respondent's evaluation: the video changed the scoring of multiple emotions dramatically. Feeling distressed raised by over 2 points on the six-point scale, just like feeling alerted that raised by 2 points. Viewers of the video have been activated and alerted as well and feeling jittery was also scored with higher values. In the meantime feeling upset and hostile have also been scored with higher values on average probably due to the fast-changing pictures.

The content analysis shows that the video was evaluated as activating, appealing and interesting (interesting was scored over 5.5 on the six-point scale!) and rather fast. Due to the content it was claimed to be ill-tempered and sad (everyone scored 1 on the sad-happy axis). As a summary we can say that the video has managed to activate its viewers due to its modern style and factual content, but it also strengthened negative feelings and a hopeless and passive state. The most disliked part of the video was the brutality and torture of animals presented. The most liked things about the video were its honesty and the facts, the fast effects and its modernity and the "actor", the speaking sausage.

Figure 29. Evaluation of the video "Mad sausage"

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6.1.8 Video 8 – Kiszálltak a mókuskerékből/Out of the treadwheel

Factual-argumentative, negative effect on audience, neutral-promoting (solution-oriented) approach

The author/actors: The video was published by two Hungarian NGOs engaged in sustainable consumption and environmental protection: the Association of Conscious Consumers and ZoldPok (green spider). Their mission is to raise awareness about environmental issues related to consumption and to help local initiatives to reach their aims. It is also their aim to spread knowledge and information about successful initiatives and best practices.

The topic: The video presents a German and a Hungarian green community. In the German community people are living in a small village and are producing all their food for themselves. They spend dinners together and everyone has his/her job within the community to make it sustainable. They live like a small community in a more nostalgic style, work for themselves and keep limited contact with the surrounding environment. The Hungarian community is more open and flexible; it shows cooperation between small farmers and consumers for a whole year where the producer (through a box-scheme) has a guarantee of being able to sell their products and the consumer getting healthy local fruits and vegetables. A young woman (member of the NGO that produced the film) appears as narrator of the stories.

Respondent's evaluation: the video changed the scoring of multiple emotions dramatically. Based on the results we can state that the video was not really appealing for its viewers, emotions such as active, excited, interested and enthusiastic have been scored significantly lower than before watching the video. Feeling excited was scored 2.5 points lower after watching the film meaning that the video has "deactivated" the viewers heavily. At the same time, values of feeling jittery and distressed increased.

The content analysis shows that the video was evaluated neutral or slightly negatively by the majority of respondents. It was a bit less clear and more confusing than other films and was not evaluated as good mannered despite the fact that it presented positive examples without frightening the viewers. It was claimed to be serious and slow and less appealing.

Figure 30: Out of the threadwheel

The most disliked parts of the video were the lifestyle presented with being very strict, too slow and inflexible. Group participants mentioned the narrator as the most disturbing and irritating part of the video as they found here irritating and cynical. The most liked things about the video were the message communicated, and the trust, cooperation and help between the members of the community.

Evaluation of the video - Mokuskerek
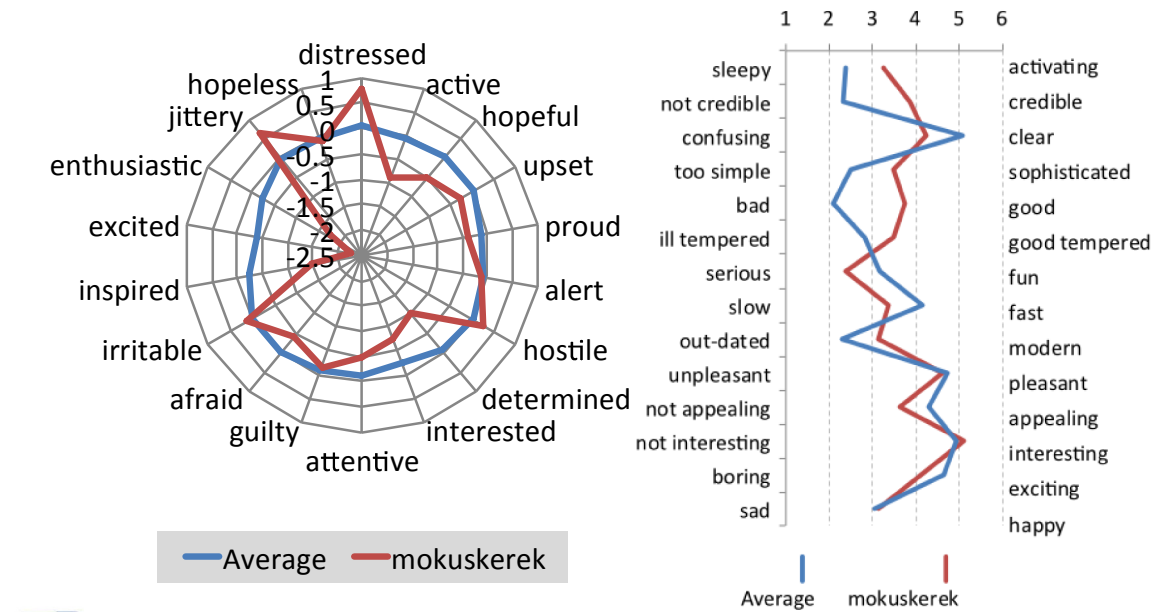
Lifestyle, slowliness, too much fixity

Community, trust and helping each other, "the message"

Figure 31: Evaluation of the video "Kiszálltak a mókuskerékből/Out of the thread wheel"

6.1.9 Video 9 – Six degrees

Factual-argumentative, negative effect on audience, fear-appeal approach

The author/actors: The video was published by the National Geographic and is narrated by Alec Baldwin, a famous Hollywood star.

The topic: The video runs through the effect each degree change can have on our world. Pictures of previous environmental catastrophes and other strongly emotional effects are used to capture the attention of the viewers building heavily on fear appeal. No positive examples are presented; the overall mood of the video is rather frightening and negative. The film is not about the possibilities on how to change or stop the effects of climate change, but about dangerous and frightening changes that will affect people's lives around the world. The video also included several short interviews with experts, however their name and profession was not available on subtitles. Our group members have watched the 3 and 4 degrees change part of the video.

Figure 32: Six degrees

Respondent's evaluation: according to the respondents' answers we can see that the video has raised negative emotions drastically. Scoring of feeling distressed was increasing by 3 points on the six-point scale and feeling upset and afraid has also risen 1.5 points. In the meantime, results also show that the film did not manage to activate the viewers as it presented global effects that are based on the overall behaviour of human society and not on the level of unique entities (views expressed by the focus group participants). The melting of glaciers, the increasing number of storms and similar environmental and weather effects are not treated by the viewers as these could be influenced, changed or stopped by them. This is the reason why emotions such as feeling interested, excited and inspired got lower scores on average than before watching the film. People became upset and nervous but did not feel that they had the chance to change it – the best word to describe the feelings might be "defencelessness".

The content analysis shows that the video – according to its content – was evaluated to be serious, ill-tempered and extremely sad. All respondents rated one or two scores on these dimensions. The video was not really activating and it was much more sophisticated than other videos. It was also claimed to be rather slow.

The most disliked parts of the video were its overall negative mood and that it pictured starving animals and ruined and damaged environment. The most liked things about the video were the topic, details and facts presented by the experts.

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Evaluation of the video – six degrees
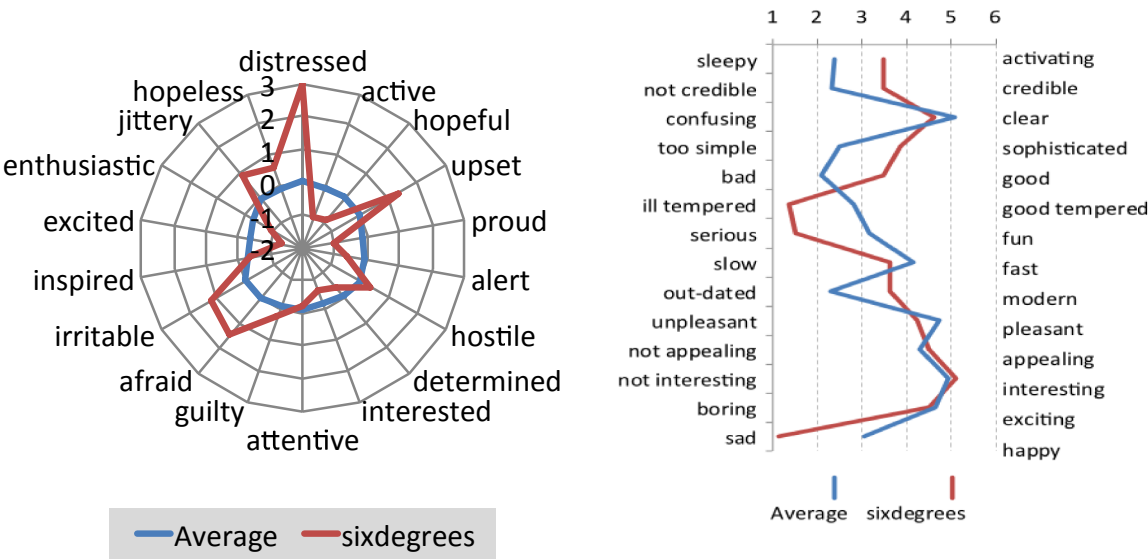
Negative, animals are starving

Story, places, people who deal with the problem, facts, details

Figure 33: Evaluation of the video "Six degrees"

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6.1.10 Video 10 – Szalmabála ház/Straw bale house

Factual-argumentative, neutral effect on audience, promoting (solution-oriented)

The author/actors: The video published by a Hungarian NGO, namely E-Misszió whose aim is to promote the use of a traditional and environment friendly building material, the straw bale.

The topic: The video presents the renovation of an old building in Eastern-Hungary using straw bale as the main building material. Volunteers of the NGO are helping local people with their workforce and knowledge of the technology. Throughout the film we get informed about the past and the international presence of straw bale buildings, the nature and parameters of the building material and we can also see the different steps and procedure of applying the technology. It is also emphasized that this building material is environmentally friendly as it reuses agricultural waste and that it is safe as well according to the latest tests carried out by quality assurance companies. We have the possibility to follow the whole process of the construction and also see people acting as a small community during it.

Figure 34: Straw bale house

Respondent's evaluation: the results show that the video about this traditional building material was not appealing for its audience. Almost all emotions were scored with lower values after watching the film than before. The video has decreased the activity and interest of the viewers, inspiration and excitement were scored almost 2 points less on the six-point scale. Feeling alerted and active were also scored with significantly lower values. There was only one emotion, namely feeling determined that was scored with slightly higher values after watching the film.

The content analysis shows that the video was evaluated more negatively in almost all dimensions than the average of other films. It was too serious, too slow and outdated. The topic covered was not appealing and not interesting for this young audience and they also claimed it to be boring. Actually the 10 minutes video seems to be too long as majority of the time is about the different technological steps taken during the construction work. The film is rather a kind of handbook than an awareness-raising message.

The most disliked parts of the video – based on the opinion of viewers – were that it seems to be difficult to use this building material and that it is not as long-lasting and bricks or other hard materials used generally in the construction industry. The positive parts mentioned were the technology and the environmental friendly attributes of the building material just like its low costs.

As a summary we can state that the topic seemed to be uninteresting and boring for the audience. The reason might be that the respondents were not in the age of building their own homes and establishing their own life and the video was also somehow negative while talking about the difficulties in raising awareness on the topic.

Evaluation of the video - szalmabala
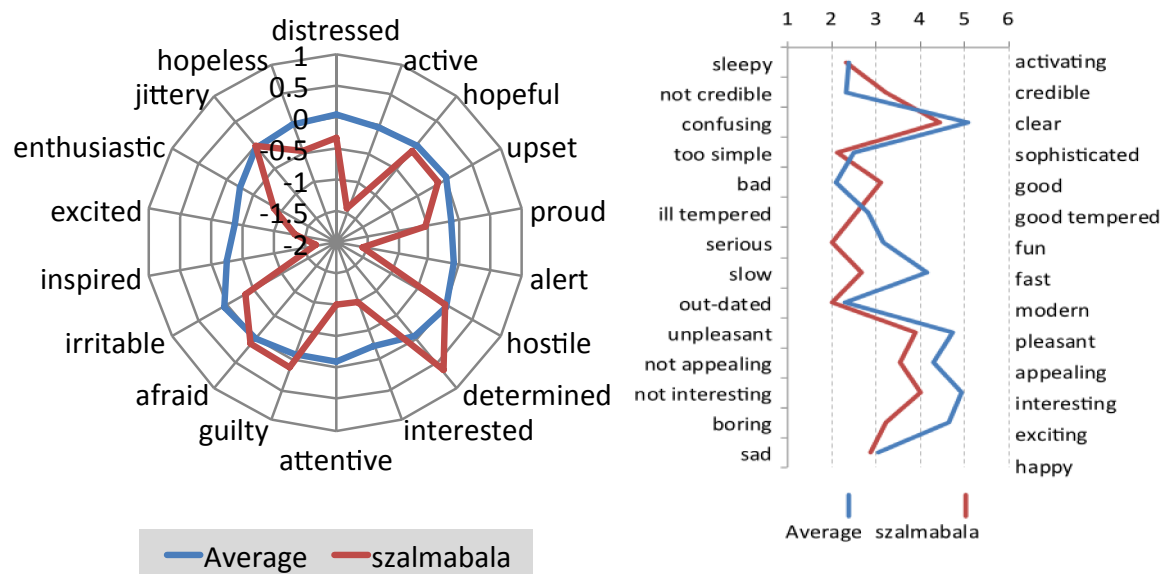
Hard to build, not long-lasting

Cheap, environment friendly, the technique

Figure 35: Evaluation of the video "Szalmabála ház/Straw bale house"

6.1.11 Video 11 – Szatyor Közösség/What is in your basket (community)?

Ecotainment, neutral effect, promoting (solution-oriented)

The author/actors: The video was published by a Hungarian NGO, namely Csalán Association to promote small, local groceries selling fruits, vegetables and home-made food from local or neighbouring farmers.

The topic: The video presents the first "szatyor" shop ("shopping bag" shop) with the founder and its volunteers just like some of the farmers. We get a short overview of the basic idea and the foundation of the grocery and we can also hear the opinion of two farmers who sell their organic food via the szatyor shop. It is emphasized that the farmers are happy and satisfied as they can see the demand of their products, while consumer are also satisfied as they have the possibility to buy local food from local farmers with the sense of reliability. Consumers also claimed that they are proud to have the possibility to support these farmers and that they do not have to buy their food with unknown origin in supermarkets. Some of the volunteers are also talking about the reason of joining the community and what their aim is for the future with this initiative: One of the volunteers emphasizes the strength of the community as a major motivating factor, while the others think that healthy, local, organic food should be available for everyone in the country.

Figure 36: What is in your basket community

Respondent's evaluation: The evaluation of the results shows that the video has managed to slightly activate its viewers: emotions such as feeling active, determined, excited and enthusiastic got higher scores than before watching the video. In the meantime the film was also able to make its audience less distressed (it was scored 2 points less after watching the video), less nervous and less frightened. The reason behind these emotional changes should be the calming music and the relatively slow and relaxed people who were telling their positive ideas and experiences about this new initiative.

The content analysis shows that the video was evaluated to be rather neutral in all dimensions. The film was considered to be rather soporific and disengaging, but more activating and more credible than the average. It was outdated, but pleasant and less interesting in general than other videos presented.

According to the open ended questions and the discussion the most negative parameter of the film was that it was boring, while the audience liked very much the cooperation between the buyers and the farmers and the motivation behind the whole initiative in general. The possibility of local food production and the farms presented were also mentioned as positive parts of the video.

Evaluation of the video - szatyor
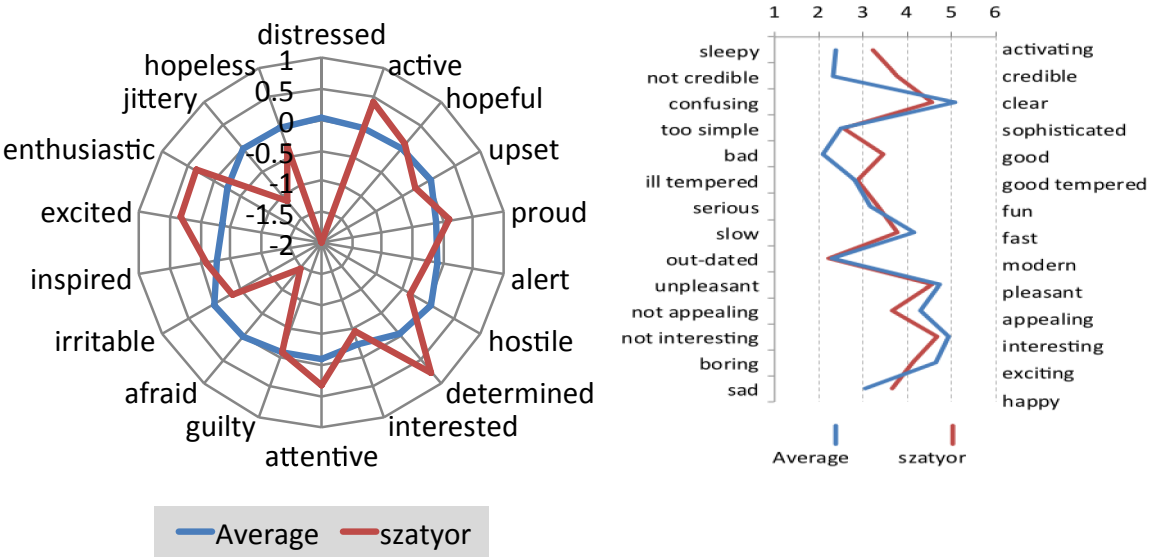
Figure 37: Evaluation of the video "Szatyor közösség/What is in your basket?"

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6.1.12 Video 12 and 13 – Biking in the city/Varos lekerekitve

Ecotainment, neutral effect, neutral-positive (solution-oriented)

The author/actors: The videos were part of a documentary on how people in Budapest are using their bicycles, how it changes or unchanges their previous life and lifestyle.

The topic: The first video is about a girl who gave up her career in a bank as she realized that she really wants to make something different: she has started to cook for a bunch of people and to deliver the meal to them on bike. Now, the company is currently providing lunch for over 100 people and every meal is carried by bicycle around the city. The package is refundable; the ingredients are from local and organic farmers. The girl is telling us about the difficulties she have faced and how valuable she and her clients think this project is. The second video is about a young legal consultant who has started to ride the bike to his workplace a few years ago one day from another. He is a good example of riding a bike while wearing business suit as it is not impossible, and that riding a bike is not changing his mentality and motivation to do his job. He also emphasized that he gets positive feedback whenever a client hears about his biking habit and that it was accepted from the very beginning.

Figure 38: Biking in the city

Respondent's evaluation: according to the results the two videos did not change emotions a lot. Most of the emotional dimensions were scored slightly lower than before watching the films as the videos were slow paced and relaxing both in audio and visual parameters. Feeling distressed was scored 3 points less and other negative emotions such as alerted, irritated and afraid were scored one point lower than before watching the films. In the meantime feeling proud was scored 1 point higher as the videos presented two young, successful and happy people.

Figure 39: Biking in the city

The content analysis shows that the video was evaluated to be good tempered and modern. But, at the same time, it was also claimed to be slower than the average and less interesting, less appealing for the audience. Despite the fact that two successful people were introduced in the videos there is no significant difference on the sad-happy axis compared to the average of films. If we take a look at the boring-exciting axis we can also see that these videos were scored 1.5 points less than the average.

As stated in the previous paragraph the films were claimed to be slow and boring also in the open ended questions. But there were several points that the audience liked a lot, for example the "can do" attitude of the actors, the fact that biking and working can be done parallel, the music of the videos and the representation of a modern life.

As a summary we could say that the chosen topic and the actors were good, just like the modern/contemporary style of the film. But, the storyline and the length of the videos were strongly negative and made the films boring for the viewers.

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Evaluation of the video - varoslekerekitve
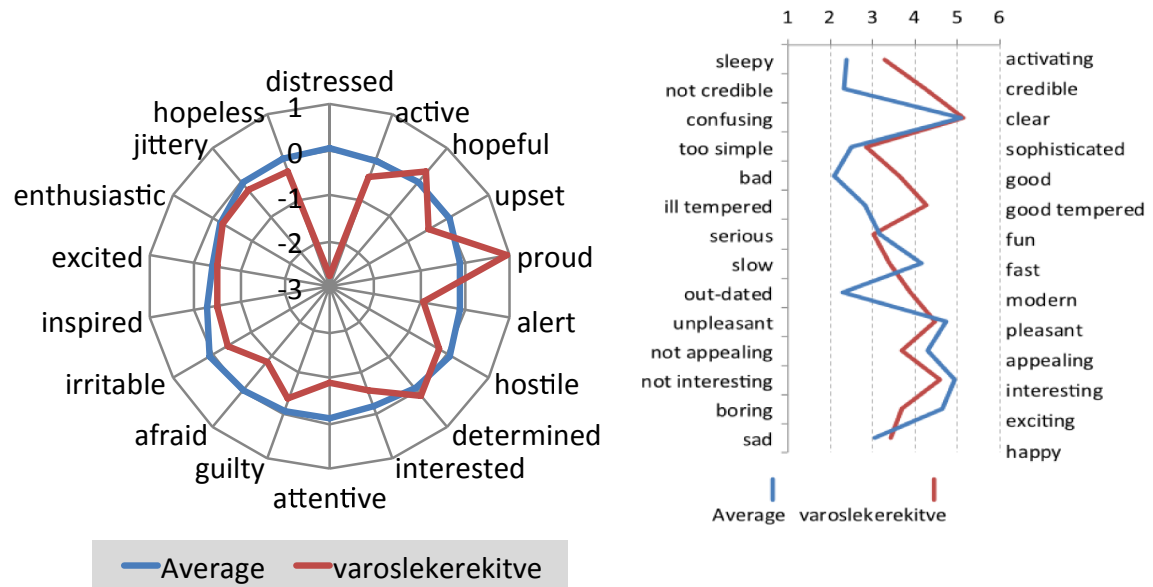
Boring, slow

There are people who do, work and biking can go together, sport is important, music.

Figure 40: Evaluation of the video "A város lekerekítve/Biking in the city"

6.1.13 Video 14 – Watch your day in 2020

Mixed, neutral-negative effect on audience, promoting

The author/actors: The video was created by Corning, the world leader in specialty glass and ceramics. The film is presenting the vision of the company about the future use of glass and displays and it is also available on their website.

The topic: The video is presenting a day of a family in 2020. Each scene is showing the possible usage of intelligent technology, different surfaces of the apartment as multifunctional interfaces. The window glass in the bedroom lightens in the morning as the alarm clock is wakening the family. The mirror in the bathroom and the kitchen table is also functioning as a display to read emails, news and calendars. The car is setting up the road plan automatically and also provides real time traffic information via its display. The bus stop is also made of glass and a display provides real-time traffic information for the commuters. In the offices walls are also working as a display, just like huge digital billboards in shopping malls.

Figure 41: Watch your day in 2020

Respondent's evaluation: according to the results the video had no strong effect on emotions – all changes were within 0.5 points compared to the initial values. The video has slightly increased the trust and hope of the audience just like feeling determined. There was no change measured in activation and inspiration – probably due to the sometimes extreme ideas and visualization: the video was not a sci-fi as it presented everyday life situations. But the surroundings were much modern than the viewers see today; therefore it could be difficult to treat the film as credible.

The content analysis also shows that credibility was low. The film was clear and much more sophisticated than the others and it was also evaluated as good tempered. (The film presented a relaxed and calm day of a happy family.) According to the results the film was modern, but much less pleasant and appealing than other ones.

The most disliked elements of the video are that it was too slow and it was sometime unrealistic due to the extreme volume of technology presented. Wherever you reach you see a display – this was too extreme for the audience, feeling the overdominance of technology in everyday life. In the meantime the viewers liked the modernity of this possible future and they thought that technology would be able to solve most of our problems faced today. They also liked that the names of the different technologies were subtitled.

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Evaluation of the video – watch your day
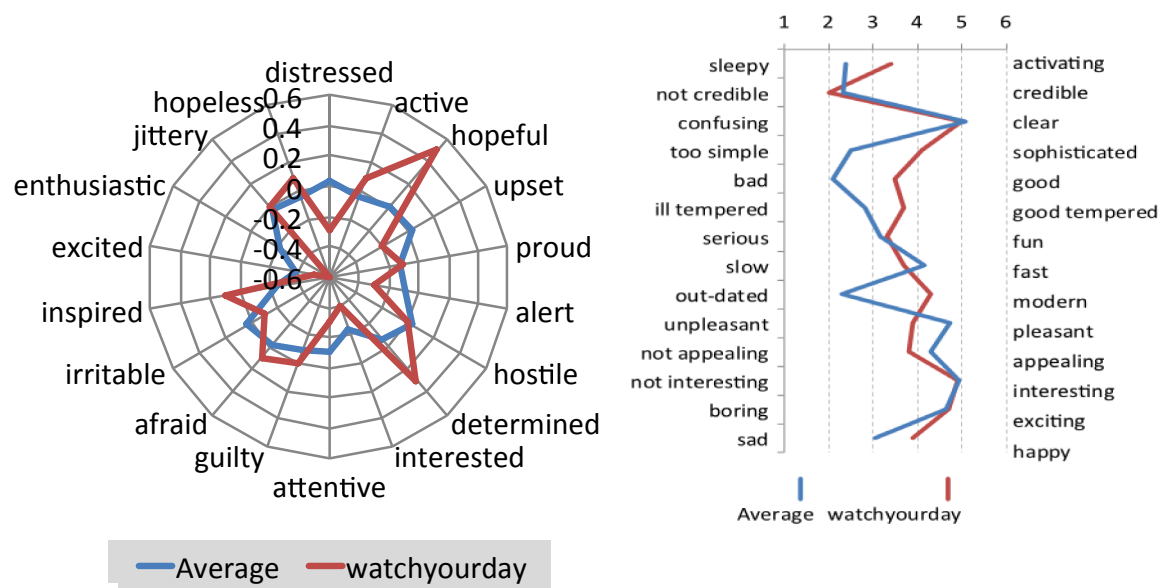
Slow, too much of technology, sometimes unrealistic

A possible future, modern, everything can be solved with these machines, the names of the machines were shown, the machines

Figure 42 Evaluation of the video "Watch your day in 2020"

6.1.14 Video 15 – Vegan love story

Ecotainment, positive effect on audience, promoting and positive (solution-oriented)

The author/actors: The video was created by a group of students within the framework of a class on sustainability marketing.

The topic: The video is a short story about changing our lifestyle to vegan in a funny and amusing way with a tricky end. A young man (with a hamburger in his hand) meets a vegan girl on the street. The guy falls in love immediately and would like to win the girl, therefore he decides to be vegan. He throws away all animal products from the kitchen, the wardrobe and buys new vegan products. The process of change is illustrated in funny but realistic way and style while providing information (written as well in the form of lists for example) about being a vegan. The successful date is also organized in a vegan restaurant and finally we can see them as an old couple after several decades of marriage. The story, the music and the production are fresh, fast and funny in general. Throughout the film some hard facts about environmental issues are visible as subtitles as well.

Figure 43: Vegan love story

Respondent's evaluation: according to the results the video had rather different effect on each of the emotions listed – however the volume of these changes were not strong in most of the dimensions. Scoring of distressed decreased by 1.5 points on the six-points scale just like feeling determined. Feeling guilty and nervous has also been scored 1 point lower than before watching the video. Emotions like enthusiastic, hopeful and attentive were scored slightly higher on average.

If we take a look at the chart of the content analysis we can see that the video was evaluated with better scores in all aspects, and in all dimensions. The film was absolutely pleasant, interesting and exciting for the audience – it was scored 5 on all 3 axes. It was also more modern, funny and fast than other videos.

The most disliked elements of the video were its bad quality (as it was made by students with low quality camera) and that the audience faced the fact that majority of our products are based on animals. The most liked parts of the film were its simplicity, kindness and funny mood. It was also mentioned that it is possible to change yourself for someone – love can be a real motivation for change. In general we could state that this video has managed to capture the attention of this young target group due to its fast and funny mood and as it was showing a possible way and motivation to change our lifestyle.

Evaluation of the video – vegan lovestory
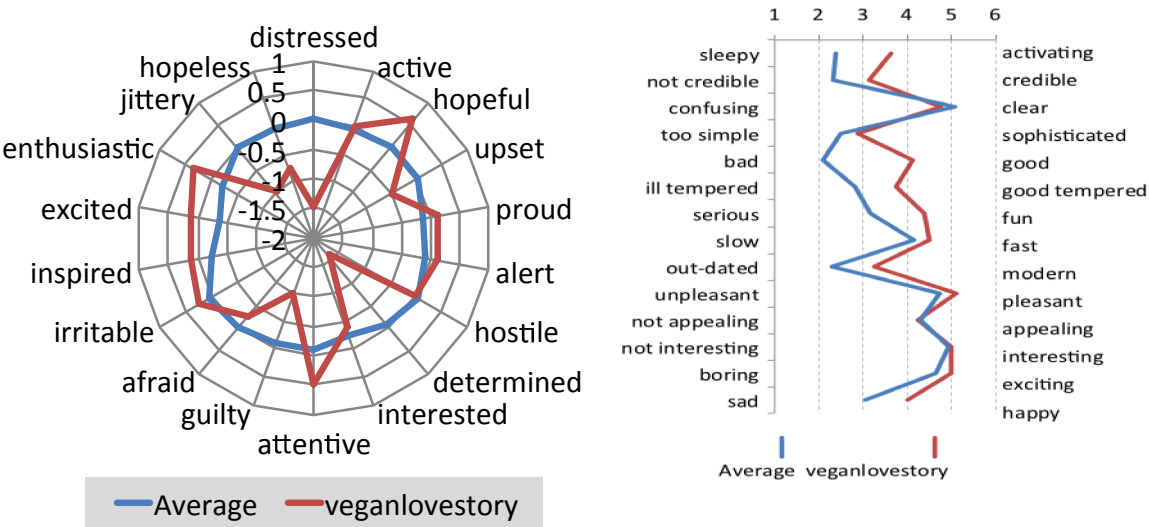
Bad quality, majority of products are animal products

Simple, kind, funny, fast, you can change for someone

Figure 44: Evaluation of the video "Vegan love story"

6.1.15 Video 16 – Jamie Oliver's speech at TED

Mixed, positive effect (for versions A and B, see below), solution-oriented

The author/actors: Jamie Oliver, the famous chef and "food educator" hold a speech at TED in 2010 about the problems of unhealthy food and obesity in the United States and all over the world.

The topic: The video is a 20 minutes speech from Jamie Oliver where he tries to raise awareness about the problems the current state of food production, consumption and obesity. Each group of viewers were shown different parts of the speech as the emotions presented were heavily changing throughout the video. There were 3 different versions presented:

-   Minutes 8:00 to 17:00 (version A)
-   Minutes 8:00 to 17:15 (version B)
-   Minutes 8:30 to 16:20 (version C)

The video between 8:00 and 8:30 presents a short interview with a mother who has just faced that the food she has been giving to her children (pizzas, hamburgers, chips, etc.) is actually killing her children and shortens their life.

Figure 45: Jamie Oliver's TED speech

From 8:30 to 16:20 the speech is mainly about food at schools, about what kind of food and how big volume of sugar is used by the school kitchens nowadays. He also shows a short visualization on the volume of the sugar: a barrow full of sugar was purred on the ground to see how much sugar our children eat only in milk products at school within 5 years. This part of the video is rather frightening as it does not provide any solution yet, only raises awareness about the issue. It has to be noted as well that Jamie Oliver uses powerful images and presentation of issues in a very professional way and communication strategy.

From 16:20 to 17:00 the video is about how to solve this problem: each children at school needs warm meal and cooked food. They need fresh food, local food, organic food. And they also need to be taught for 10 recipes. This part is providing a solution and a more positive mood.

From 17:00 to 17:15 the speech is widening the horizon: Jamie talks about the future of those children who know how to cook. This is a life skill, as he mentions, that you can survive with e.g. in case of almost any kind of a crisis. The style of the speech is very empowering and targeted at the (young) audience.

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Respondent's evaluation: according to the results we can see that there were significant differences in the emotions changed. In case of the C version the emotions were not really changed according to the scored values. Feeling attentive and enthusiastic has been scored slightly higher, just like feeling proud, but these emotional changes were not really strong. As mentioned above, this part of the video is rather decently frightening, but the audience did not see the most dramatic part, where the mother is crying due to "poisoning" her children.

If we look at the data of the two longer videos (A and B) we can see that feeling irritated and distressed was scored much higher, while feeling proud much lower. The reason could be that these two groups have also seen the mother at the beginning of the video and they have faced the same situation (the situation they are living currently) of the effects of unhealthy food.

However there is also a difference of the two longer videos as well. Video A is treating the audience (the group participants) as a kind of passive actors who should be cooked and taught to cook during the school years. While video B is opening the future with the extra 15 seconds while he talks about cooking as a tool for surviving. This difference is also visible in the results: in case of activity we can see that the extra 15 seconds managed to keep to initial activity level, while without these sentences the activity was much lower (as the audience received no vision). The extra 15 seconds also rose the scoring of feeling hopeful and proud, while in the meantime decreased the scores of feeling alerted. We can also see a huge difference in the values of feeling afraid in case of the two versions. In general we can say that

- Version A started with a frightening information followed by neutral and passive content
- Version B has also started with a frightening part followed by neutral and passive. But the end was showing a positive vision for the viewers that minimized fears and negative feelings
- Version C was rather neutral for the audience without any significant emotional parts

If we take a look at the chart of the content analysis we can see that the video was much more activating and credible than the average. It was evaluated to be clear and sophisticated and more serious than the average. In case of seriousness we can see the difference of the 3 versions in accordance with the different content presented. Version A was evaluated as the most appealing and interesting video of the three versions, almost all viewers scored maximum for interesting. We can also see that all three versions were evaluated as very sad according to the audience's opinion. The film was more modern than average despite the fact that it had no visual effects at all.

The most disliked elements of the video were the facts that the target group faced their current habits and that children at school (in the film) did not recognize at all the vegetables Jamie showed them. The most liked parts of the film were that it was motivating and informative, the way how Jamie presented and the informal tone of the whole speech. For the majority of participants Jamie Oliver is an inspiring person and most of them regularly watch him on television or on the internet or use their recipes. The powerful images and actions during his speech fascinated the audience.

Evaluation of the video – Jamie Oliver versions
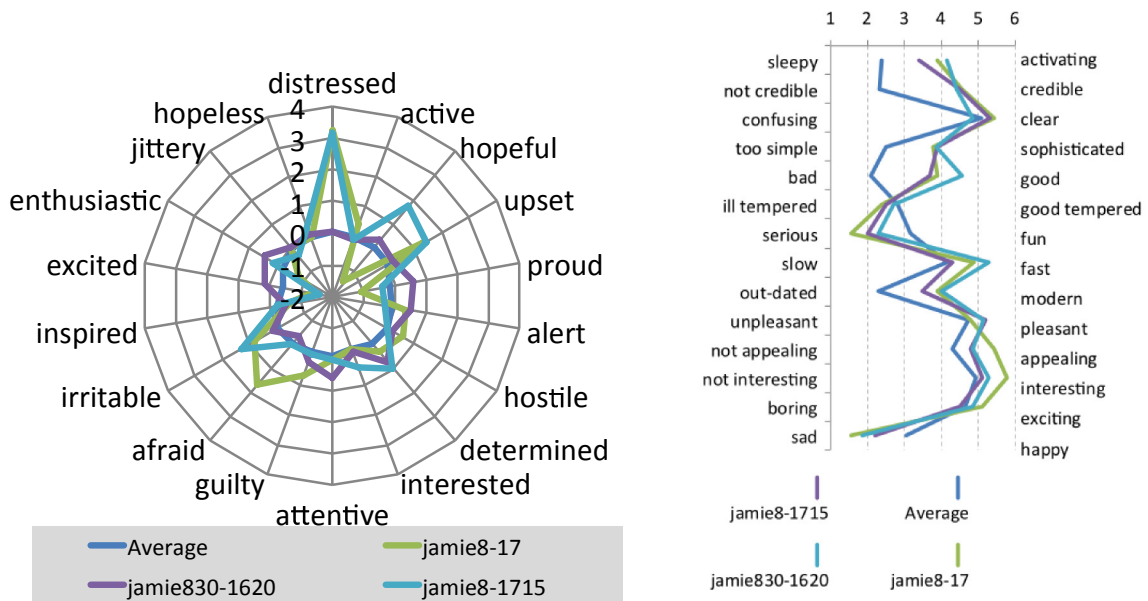
Boring, the facts that we've faced (children are not aware of vegetables)

Motivating, informative, realistic, informal, the way of presentation, examples and the trial

Figure 46: Evaluation of the video "Jamie Oliver's speech"

6.1.16 Video 17 – The real bears

Factual-argumentative, negative effect on audience, fear-appeal

The author/actors: The animation was created by the Centre for Science in the Public Interest and directed by Alex Bogusky, a famous advertising professional. The film is a kind of answer on Coca Cola's advertising campaign with the polar bears ("open happiness") using similar creative solutions with a totally different message: soft drinks are the major cause of many diseases. The video has been watched 2.5M times on YouTube.

The topic: The video is a short story a polar bear family enjoying their life and drinking soft drinks all the time. As time passes we can see that the father have pain in his legs and finally the physician has to amputate. The father is using a wheel chair from that point and purred the soft drink into the sea at the end of the film. We can see many written fact and information during the video in subtitles.
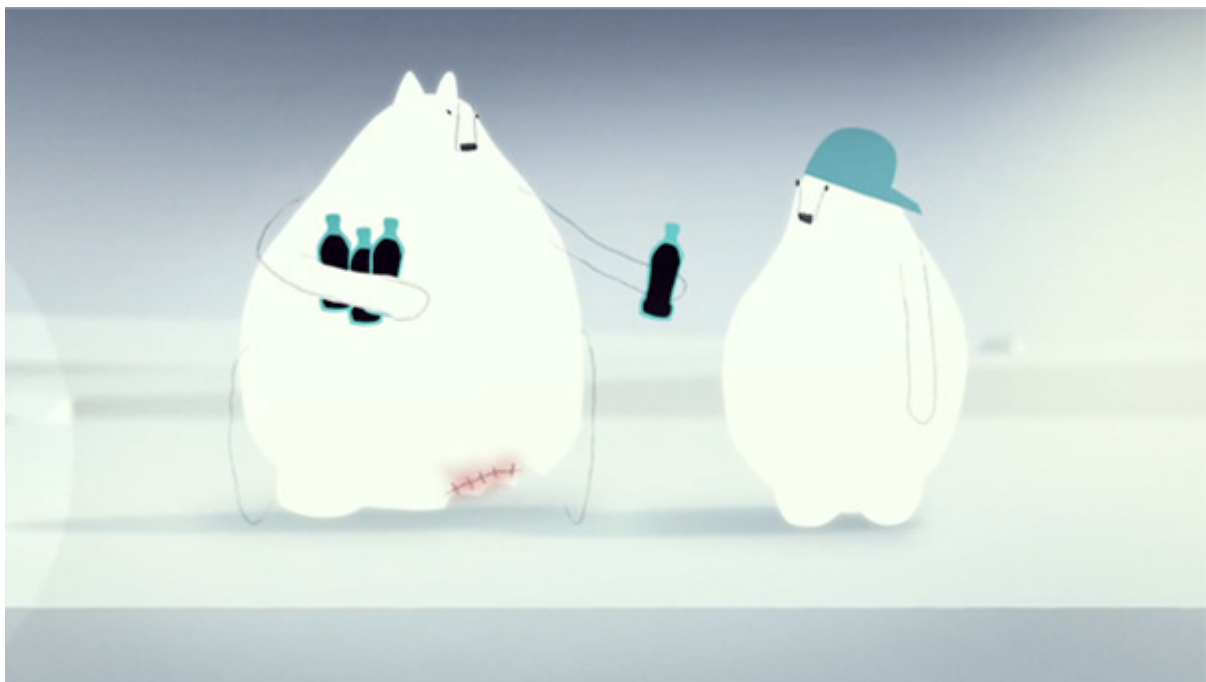
Figure 47: The real bears

Respondent's evaluation: according to the results the video had no really strong effect on the emotions of the audience. Feeling distressed and upset were slightly strengthened, just like feeling afraid. Viewers of the film have also scored feeling hopeless with higher values compared to their status before watching the film.

If we take a look at the chart of the content analysis we can see that the video was evaluated as more activating and better than the average. It also was more sophisticated and funny and also claimed to be modern according to the scores. The most disliked elements of the video were the amputation of the bear's leg and that the animation was a bit too much morbid. Some of the viewers also disliked the animation, while others mentioned as positive attributes. Other positively evaluated parameters were the storyline, the music and the overall learning.
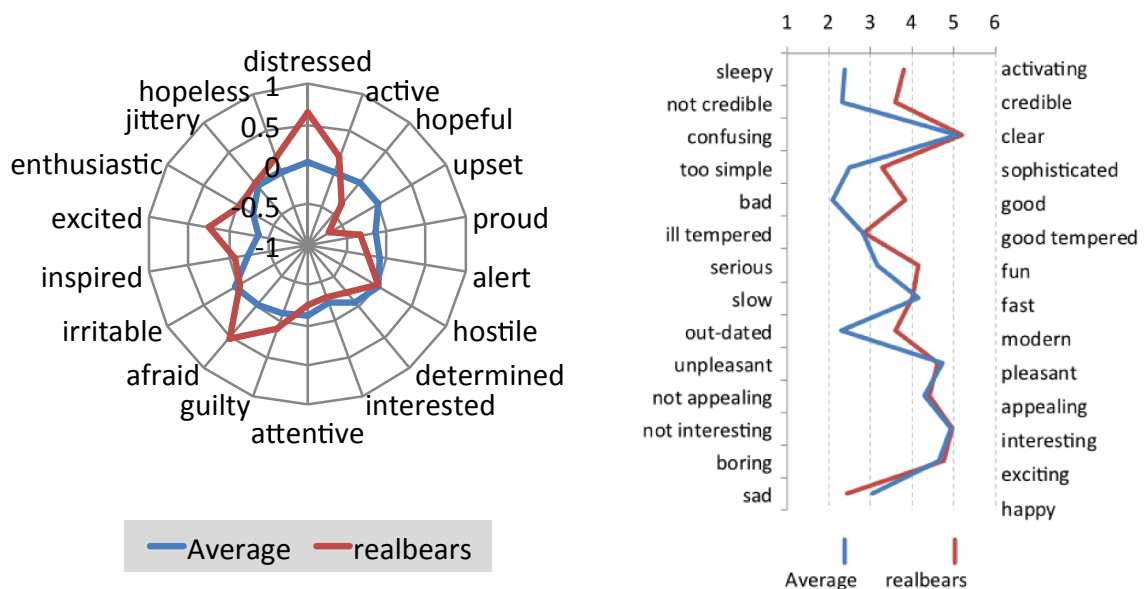
Figure 48: Evaluation of the video "The real bears"

For this video, I also analysed the comments related to the video on YouTube additionally in order to see the evaluation of the video of users active on the largest video-sharing website worldwide. Comments were gathered using YouTube data API (https://developers.google.com/youtube/analytics/v1/) and user relations were analysed and visualized by a network analysis software, Cytoscape (http://www.cytoscape.org/, an open source network analysis software). With the use of the software we can import csv files (Comma Separated Values) with information on the nodes (users) and edges (connections) between them and calculate different metrics on the data file (e.g. the number of connections or of incoming and outgoing edges (indegree and outdegree) and to visualize the result by changing colours, shapes and size of nodes, edges and labels). It is also possible to modify the default network layout by grouping the nodes according to different attributes helping the analyst to evaluate the results.

The visualization shows the network of commenters grouped by the topic of the videos. The colour of the nodes represents the indegree (re-comments/references) from green to yellow, while the node size represents the outdegree (number of comments). The increasing size and intensity of the colour of the yellow node shows the importance of the individual's role in the network (the bigger and stronger the colour, the node is playing a more important role).

On the chart below I only visualized those users who had any connection with other users, e.g. they have commented something that was answered by another user, or they were answering to other users' comments. In total there were 978 comments on the video by the time of data collection from 761 different users. Almost 40% of the comments were reactions to another one, meaning that I could investigate a rather intensive discussion on the video. Analysing the comments (and filtering trolls and bulk commenters) we can see the different opinions and thoughts about stakeholders' responsibility in fighting obesity. For this analysis I chose 3

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specific groups of commenters with the highest number of comments, re-comments and mentions. The visualization of the groups is available on the chart below.

Group no.1 was set up by numerous users and the discussion was started by the user Jacmar44, marked with a red dot. This user was the one who was mentioned the most by others, but according to the results we can see that some "sub-discussions" have also been started among the users. The most frequently mentioned comment of Jacmar44 is:

"Dude I am no expert but here is what I know. Our body maintains its sugar levels using insulin. And when we abuse it by having a high sugar diet. Our insulin cannot cope or we effectively make ourselves Diabetic by disrupting this natural balance by unnatural intake. Google it I can't be bothered."

Group no.2 was much smaller, but the "central" user, marked in orange (username: OnlyEdAndTheAlmost) was mentioned many times by others. The two most important comments by the user were the following. In this opinion group commenters call for stronger producer responsibility in fighting against unhealthy dietary patterns:

"smart way to think to be honest... i am quite tired of looking at disgusting fat fucks while im drinking coke and i'm going to a doctor tomorrow"

"SO I suppose you'd rather have people drink aspartamine based soda's instead? you working for the Splenda lobbyist then? DON'T BLAME THE DAMN SODA! damn the lack of exercise in the American society. I do agree that HFCS is garbage and should be banned, this would increase the price in soda and people will be less likely to buy soda then. Personally I don't drink soda much but I limit my sugary drink to Gatorade and the occasional Red Bull which all contain real sugar not that artificial crap"

Group no.3 is a discussion of 3 users around the following comment of sindre1985 about the link between sports and consumption of unhealthy food and his general scepticism towards unhealthy foods, drinks and lifestyles:

"I drink all from 220cc to 2000cc of cola every day, but i still have a six pack and fine white teeths. as long you still do some workout and brush your teeths,you wont become a fat stupid american who drinks diet coke. also i am *snusing* its banned in the EU. *snus* is a tobacco product with 3 times larger nicotin amount then smokeing. what i am trying to say is, sure some things are unhealthy, but as long you aint sitting on your ass all day, you should be okay. (sorry for bad english)"

and a typical answer from HA:

"Yeah, it's well known that people with sixpacks are immortal human beings that never never ever get sick. Why don't you add some cocain and heroin to your daily routine? You don't have to care about the consequences. You have a fricking sixpack!"

Visualization of commente

Node Colour: number of incoming message
Node Size: number of connections

Total number of users: 761
Total number of connections: 382
Total number of comments: 978
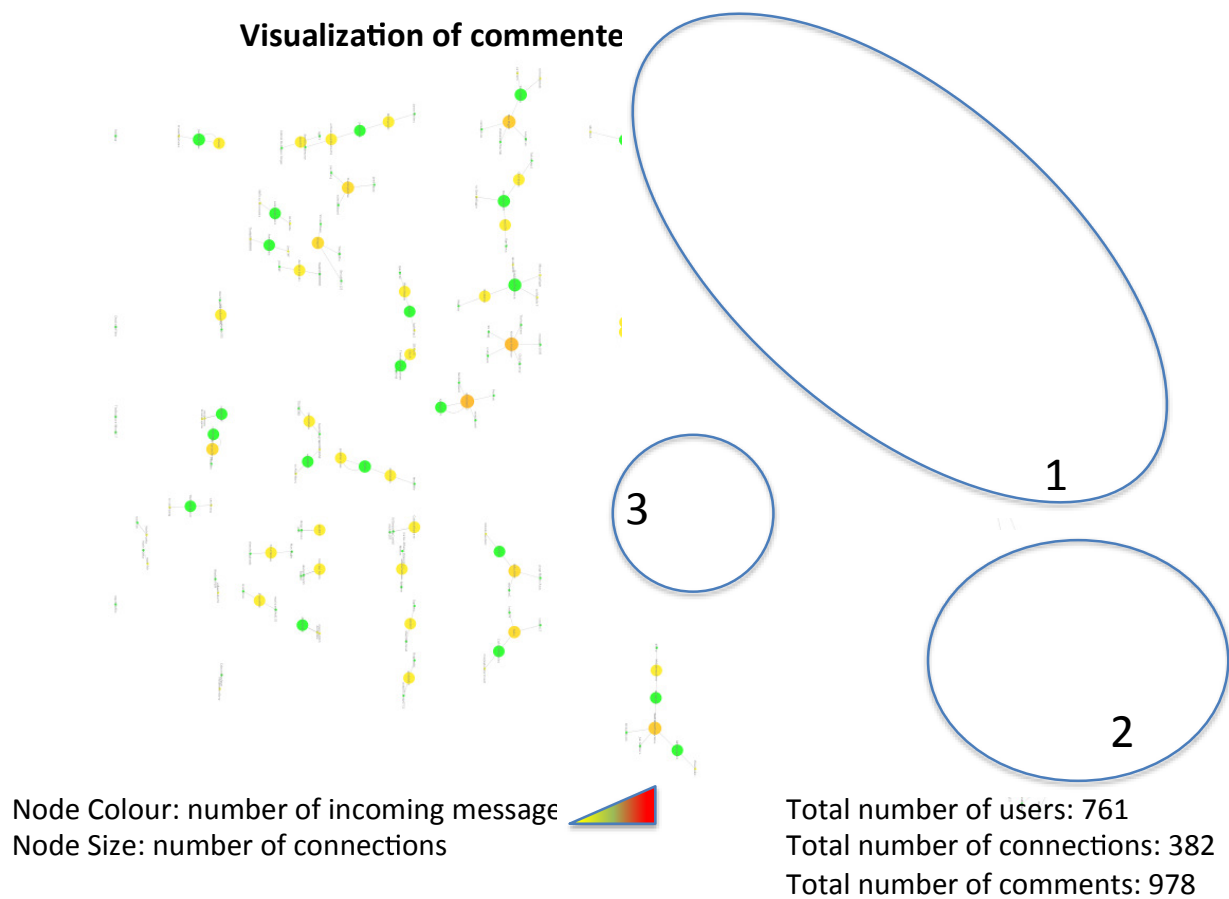
Figure 49: Analysis and visualization of users' relations

As Figure 31 shows, the first group of comments focusing on individual responsibility is the largest with one main opinion leader who started the discussion (group 1) and generated an intensive discussion. The second group of comments mainly blames the industry and call for producers´ responsibility to fight against unhealthy eating practices.

6.1.17 Video 18-19 – "Hogyan legyek jó nő" – "How to be a cool woman"

Mixed/factual-argumentative, positive effect on audience, promoting (solution-oriented)

The author/actors: The actor in these short videos is a famous Hungarian fashion model, Nora Takacs who has started to make a webpage within one of Hungary's largest portal targeting women, life.hu. The aim of this website is to help women with tips and tricks on health, beauty and similar topics with the help of articles and videos. The Facebook page of the "Hogyan legyek jó nő" program has more than 130.000 likers. The videos are uploaded to the Facebook page, to the life.hu website and also presented in life.hu's TV channel.

Topic, message and framing: The selected videos are presenting tips for environmentally friendly and healthy cleaning and a shampoo made of natural components. In both cases the film is very simple; Nora Takacs is standing alone in her flat (the apartment is also simple, not fancy) while presenting her tips and 'experiments'. The presentation starts with information on the unhealthy ingredients of regular products followed by the preparation of her own products based on natural ingredients. She uses materials that are easily available in most households, such as lemon, olive oil, vinegar and shows live how the shampoo and the cleaning materials work. The framing is mainly based on health prevention, environmental protection and cost efficiency.

Respondent's evaluation: according to the results the videos had a moderate emotional effect on the audience. Both videos have managed to increase excitement to some extent, the video on cleaning also increased proudness. In the meantime negative feelings were slightly scored with lower values, such as feeling irritated, afraid or guilty.

Figure 50: How to be a cool woman

If we take a look at the chart of the content analysis we can see that both videos were evaluated much better than the average. In each dimension, the scored values are higher by 1-2 points indicating a significant difference compared to most of the videos.

According to the open-ended questions the most disliked element of the videos of "Hogyan legyek jó nő" were the lack of story and that sometime these were too much detailed. But the audience found the videos really interesting and useful. They have also emphasized the importance of watching something new and cost efficient that is effective despite the fact of being made of simple ingredients. The real time trying proved to be also very positive for the viewers.

Evaluation of the video – "Hogyan legyek jo no" videos
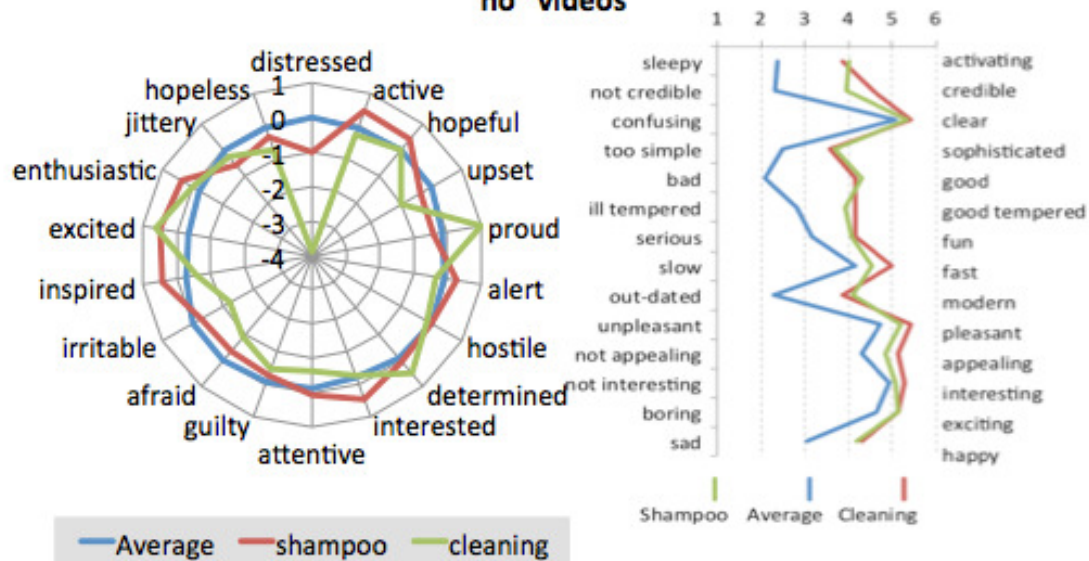
Figure 51. Evaluation of the videos "Hogyan legyek jó nő"

I analysed the Facebook comments on the hand-made natural shampoo video using Cytoscape and content evaluation. In total, I found almost 100 comments on the video from 71 users. There were 10 small discussions as well between the members (mainly between Nora Takacs and a user). When analysing the visualization below we can differentiate six different groups according to the content of the comments. The group marked with yellow has asked questions from Nora, some of them were answered directly. The blue group was sharing tips and tricks for other readers of the Facebook page. There were 2 users commenting negatively on the video, but we can also see a huge number of users who shared their happiness and said thank you for Nora after trying the new homemade bio-shampoo. As we can see the video has managed to generate a discussion and also convinced some of the viewers to try the solution presented.

Analyses of comments related to the bio-shampoo video of Hogyan Legyek Jó Nő Facebook page

Total number of users: 71
Total number of edges: 10
Total number of comments: 98
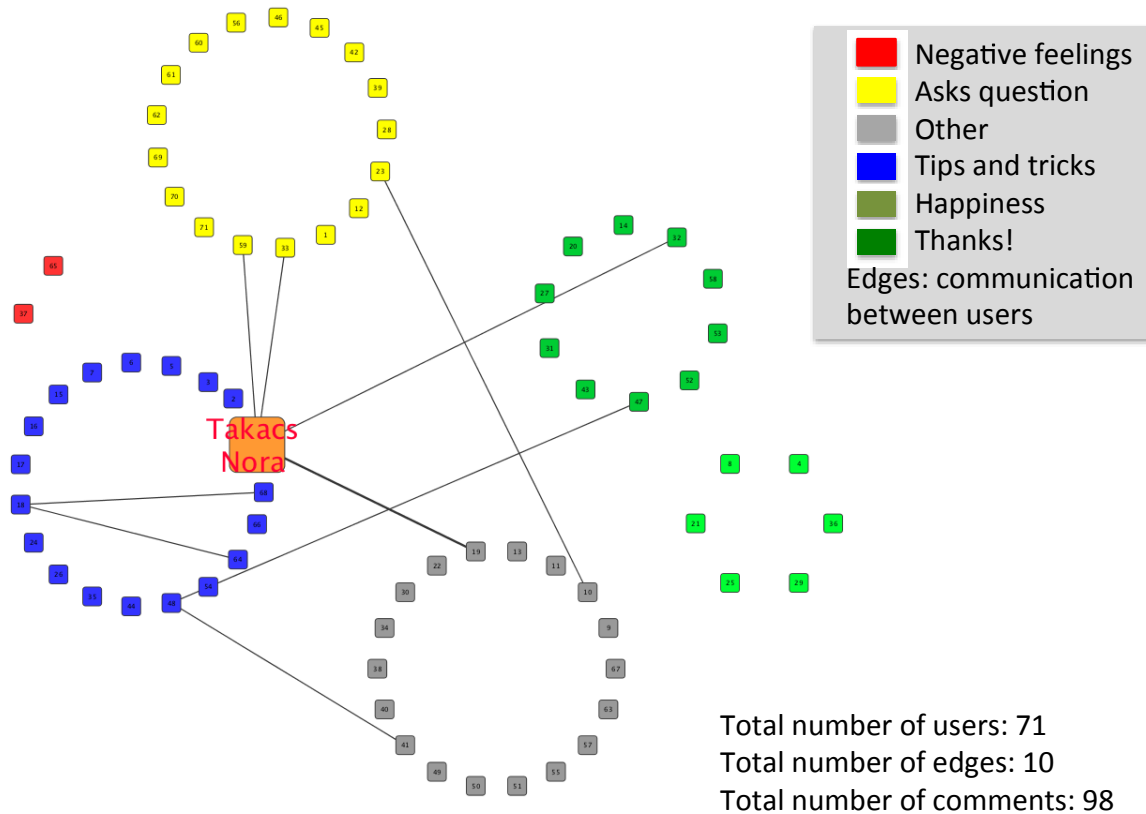
Figure 52: Analysis of comments related to the home made natural shampoo video of the "Hogyan legyek jó nő" Facebook page

6.2 Follow-up survey investigating the long-term effects of the selected communication materials and discussions

A follow-up/recontact survey was carried out among the participants of the focus group discussions 3 weeks after the focus group took place. The online survey was carried out using surveymonkey.com, invitation emails were sent out to email addresses collected during the discussions. The survey provided a very important initial result: it is extremely difficult to contact and engage youngsters via email asking them to devote from their free time; the only online communication interface used by them is Facebook (even the teachers use closed Facebook groups at school to engage youngsters for classroom work – e.g. they create specific closed discussion groups related to literature assignments). This fact also resulted in a relatively low number of respondents to the recontact survey, however the method itself determinates a maximum of 60% response rate according to practice. Finally, 18 responses were collected that reflects a low level of interest generally in taking part in surveys among youngsters.

All of the 18 respondents remembered well all short videos and their content and scenes watched. The most inspiring acts or people according to the answers were Nóra Takács with the video on the hand-made natural shampoo and cleaning material, Jamie Oliver with his TED speech (and very professional communication style and strategy) and the president of Uruguay with his speech. This result is a good confirmation on the initial video evaluations as well.

16 out of 18 respondents talked about the films to their friends and family after the workshop and 14 of them reported to have talked about the videos in a positive manner (2 in neutral). 7 out of 18 respondents reported to have searched for similar content on the internet after the

workshops, 5 of them were looking for other videos of Nóra Takács, 4 of them have also joined (liked) the Facebook page of "Hogyan legyek jó nő".

12 people have reported that the videos watched had an effect on his/her behaviour in different dimensions of their everyday life. The effects mentioned were about more conscious shopping (looking for labels, healthy food, less sugar, more vegetables). 7 youngsters have also tried more sustainable solutions (namely new shampoo, energy saving bulbs, biking, selective waste collection, gardening) and all of them were satisfied with the new solution. 4 of the respondents have also raised new ideas on how to be more sustainable in their life.

Did you change your habits in the following fields of life since the workshop?

Field	Percentage
Eating more healthy food	89%
Less soft drinks	89%
Short distance travels by feet or bike	78%
More attention on energy efficiency	72%
Less fast food	72%
More gardening	61%
Buying local food	56%
More natural haircare and cleaning	39%
Less meat	28%
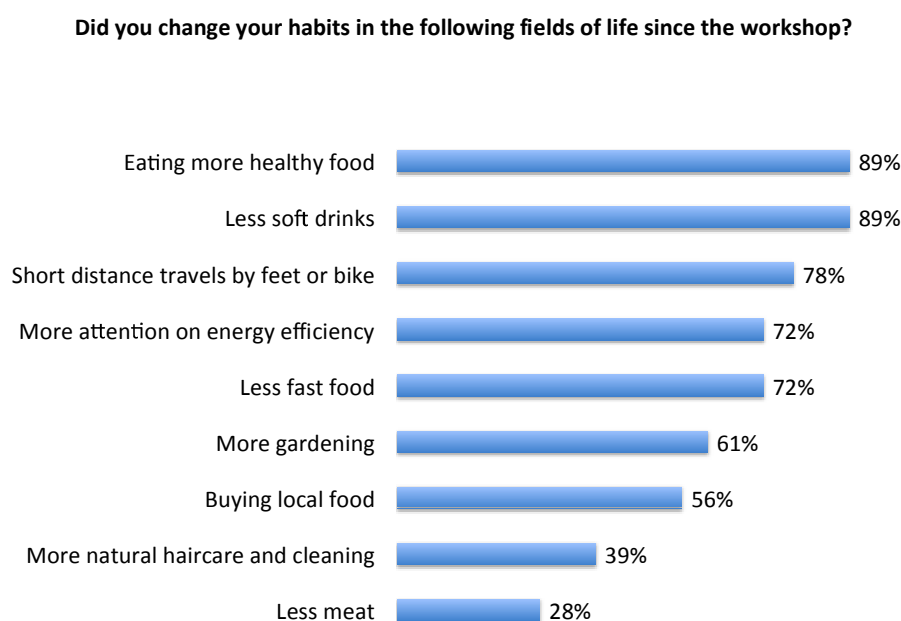
Figure 53: Response of participant on changing habits after the focus group discussions

If we take a look at the responses on attitudes, consumer behaviour and values of those respondents who have also filled out the recontact questionnaire we can see significant differences. The recontact survey respondents found sustainability and environmental issues much more important than the average, and they also ranked higher the importance for a stimulating life and ambition. According to the results of the survey, participants filling in the recontact survey have changed their behaviour in many areas, mainly in eating healthier and

reducing the amount of soft drinks, biking and walking on short distances and energy efficiency.

	Average	Recontact survey participants
Life full of change	4,2	5,1
Altruism, help	4,3	5,7
Protecting the environment	4,2	4,8
Wealth	4,0	4,1
Fun, amusement	5,1	5,1
Peaceful world	5,3	6,0
Authority	2,5	1,9
Respect Earth	4,5	4,9
Equality	4,6	5,1
Ambition	4,8	5,8
Stimulating life	4,9	5,4
Prevent environmental damage	4,7	4,9
Influence	3,1	3,4
Enjoy life	6,1	6,0
Social justice	4,6	5,3
in accordance with Nature	4,0	4,4
Social influence, force	2,4	2,3

Table 24. Average scoring of values by the recontact survey participants on general value orientation

In terms of consumer behaviour items we can see that the recontact survey respondents are generally more conscious and environmentally aware than the overall average of the participants. Feeling responsible for other (disadvantaged) groups of society is also higher among recontact survey participants according to the results.

	Average	Recontact survey participants
People living in rich countries are responsible for people living in poor countries.	3,6	4,3
It is important for me to do more for the environment than others.	3,6	4,1
I can do a lot for the environment with my consumption decisions.	4,0	3,9
I prefer buying the products of those companies who do not produce in countries that violate human rights.	3,8	3,5
I prefer to buy fair trade coffee and tea.	3,8	3,4
I like to buy organic and local food.	3,9	3,9
I frequently buy in discounts, like Penny, Lidl or Aldi.	4,3	5,0
Usually I buy the cheapest products.	3,5	3,9
I do not think much when I go shopping.	3,0	2,3
I only have one life, so I do not want to deal with the problems with future generations.	1,9	1,6
Quality is not the most important factor for me when I go shopping.	2,4	2,9
When I go shopping, I know how much products should cost.	3,6	3,3
I am well informed on quality and availability.	3,7	3,8
I like to compare prices and quality.	4,2	4,2
Bigger shoppings are always planned before.	4,0	4,6
It is worth to look for information before buying something new.	4,2	4,5
I like trying out the newest products.	4,4	4,7
I always shop spontaneously.	2,8	2,3
Shopping makes me happy.	3,3	3,4
Sometimes I really like advertisements.	2,0	2,2
I always buy the same brands.	3,2	3,2
I always buy my favourite brands.	3,8	3,6
I always do shopping at the same stores.	3,9	3,9

Table 25. The average scoring of consumer behaviour items by the recontact survey participants

Regarding responses on general attitudes we can also see the higher responsibility and awareness of recontact survey respondents on environmental and social issues. It is also visible that materialistic items were scored with lower values.

	Average	Recontact survey participants
I love having a lot of „stuff", e.g. lots of cltohes, sport equipments and devices etc.	4,8	5,0
If there is a new trend or fashion, I do not really like (after a short time) my old stuff anymore.	2,9	2,8
I like to shop after a hard day	2,4	2,8
Everything around me must have a certain niveau and style.	4,1	4,1
Uniqueness is important when shopping	4,0	4,2
I am never satisfied with items at my home	1,8	2,1
I always feel I need something	2,2	2,2
If a new product of my interest is released I have to buy it	2,7	2,4
I like to compete with others	2,9	2,6
Its important for me to show my succes to others	3,3	2,9
I enjoy if people pay attention to and look up to me	3,7	3,6
Its important to enforce my opinion	3,8	3,6
I dont like if others opinion differ from mine	2,6	2,6
Carreer is important for me	4,4	4,4
We need to be rude sometime to step forward	3,4	2,9
My friends say that I am willfull sometime	3,1	3,2
Its important for me to set orders when working	2,6	2,6
As far as possible I would always want to drive a car of my status in society	3,3	2,8
I need competition with others to see how good I am	2,9	2,6
I am very ambitious and want to be always better than others	3,4	3,1
What I said once, should not be changed.	3,0	2,9
If I am convinced o something once, I will not change my opinion.	3,2	2,9
Generally, I think it is not worth to deal with others' problems, we cannot really do anything anyway.	2,5	1,9
I cannot deal with others' problems, I have enogh to deal with in my own life.	2,0	1,7
I regularly help the 'outsiders' of society (eg. Immigrants, refugees, disabled people, the elderly and other disadvantaged).	2,4	2,9
If I work in teams, usually I stay in the background.	2,6	2,6
It makes me worried if I think about in what environmental conditions my children and grandchildren will have to live.	4,0	4,6
We may not damage the environment for future generations	4,5	5,1
I mostly buy softdrinks and beers in refundable glasses/bottles.	2,9	3,4
I would pay more for electricity if I knew it comes from renewable energy sources.	3,4	3,5
I rather prefer to get plastic bags when I do shopping than carrying bags with me.	2,2	1,6
If there will be more nature protection interventions and measures, people will not be allowed to do anything.	2,5	2,4

Table 26. Average scoring of general attitudes by the recontact survey participants

According to the segmentation of the recontact survey participants we can clearly see the higher rate of socially altruistic respondents and also a higher value for the exclusivity segment.

		Answered the recontact survey	
		No	Yes
Positionality	Higher status	32.1%	33.3%
	Competition	41.1%	38.9%
	Inflexibility	26.8%	27.8%
Social responsibility	Rejector	51.8%	33.3%
	Altruist	48.2%	66.7%
Environmental responsibility	Anxious	78.6%	83.3%
	Active	14.3%	11.1%
	Rejector	7.1%	5.6%
Materialistic	Exclusivity, abundance	23.2%	33.3%
	Fashion, trend	76.8%	66.7%

Table 27. Segmentation of recontact survey participants

6.3 Summary and discussion

Through carrying out the study it was clearly visible that reaching and involving the youth in sustainability is a challenging task.

The selection of the visual material was based on the relevance of the content, emotional effect, up-to-date examples, and fashionable solutions addressing a sustainability problem. The videos using either negative or positive emotions were evaluated as interesting emotionally neutral videos were found rather soporific and respondents felt passive and bored. The emotional content of the visuals were clearly more important than the content itself, the strongest effect was measured related to the credibility and communication styles of the sender. Credibility, and even more the passionate and inspirational character of the sender is crucial to activate youngsters in accepting new lifestyles or practices who – based on the focus group discussions – seem to be keen on finding everyday heroes who help guiding them to make the right and "legitimate" decisions in their life (a very good example were the videos involving Uruguay's president or Jamie Oliver). This finding puts further challenges for government-led interventions and communications as youngsters expressed a deep pessimism and disappointment towards politicians (feeling of disappointment and frustration was mainly attributed to a recent visit at the Hungarian Parliament[12]). At the same time, youngsters still call for governmental actions and showed a high level of hopelessness.

Next to the credibility and passionate character of the sender, the (every day or life-stage) relevance of the topic and message, the style of the presentation is another crucial factor as well, for instance as it was in the case of "six degrees" or "Cserpes milk-bar" – while the products of Cserpes and the idea and vision behind them was interesting and inspiring, the

[12] Many of the students participated as visitors at a Hungarian Parliament sitting a few days before the focus group discussions. As the topic of the sitting concerned the future physical and recreational activities of school children at school in the coming years, students had a high expectation and enthusiasm. Unfortunately, as the respondents reported, students were faced with an extreme non-interest of politicians towards the topic and experienced a high level of disrespect both towards future generations and generally to the topic and sitting.

style of the presentation and the sender was rather soporific, out-dated and boring, students would not have watched it on TV or on the Internet. Based on the latter, youngsters immediately make their decision on watching the communication and getting engaged in further activities or turning away.

In terms of style, the funniest, most up-to-date and appealing video was made by students and called the "Vegan love story". Most of the students were not familiar with the term 'vegan' and started to watch the video with high level of scepticism but shortly after the video started they interest increased and it was surprising for them as well that they became interested in the explanation of a vegan lifestyle, and both the challenging and good side of it.

As table below shows, the most successful vidoes had a positive message, a dynamic and engaging or humours style and either a modern, dynamic style (e.g. the music, the participating actors/persons) or an inspiring, credible sender of the message communicated.

Title of short film	Categorisation of communication approach	Emotional effect on audience	Format	Key topics adressed	Respondents evaluation
Best scored					
1. Attractor car test	positive, solution-oriented	positive	ecotainment	sustainable mobility, electric car, economic aspects	Positive, appealing, can be relevant in a couple of years, modern communication style
2. Local community vision – CRISP project	positive, solution-oriented	positive	ecotainment	sustainable future societies, local consumption and production, communities	Positive, but less personal relevance, too general, good style of communication, speaking to the youth.The topic is relevant for most participants but the video failed to generate high relevance.
3. Speech of the president of Uruguay/Uruguay elnökének csodálatos beszéde	Positive, promoting (solution-oriented)	positive	factual-argumentative (emotional speech)	Growth vs development, equity, happiness, quality of life, sustainable development	Positive, very appealing, activating, engaging, inspiring and credible sender of message. Remembered in follow-up survey. Topic highly relevant for all participants.
15. Vegan love story	positive, promoting, solution-oriented	positive	ecotainment	animal rights, food culture	Positive, activating, interested, humorous, modern communication style.
16. Jamie's food revolution	positive, promoting, solution-oriented	positive	mixed versions	healthy food, food culture	Positive, very appealing, activating, engaging, inspiring and credible sender of message, high relevance. Remembere din follow-up survey. Topic highly relevant for all participants.
18. How to be a cool woman? Home-made natural shampoo/Hogyan legyek jó nő? Házi sampon	positive, promoting, solution-oriented	positive	mixed	health, personal care, chemical-free products	Positive, credible and inspiring sender of the message, easy to use tips, practices. Remembered in follow-up survey. Highly relevant for all participants (both gender).

Worst scored					
4. Cserpes Milk Bar/Cserpes tejivó	neutral, promoting, solution-oriented	neutral	factual-argumentative	healthy food, entrepreneurship, food culture, youngsters	Negative, boring, not credible sender of the message, no trust from youngsters.
7. Mad sausage	negative, fear-appeal	negative	mixed/emotional	unhealthy food, animal rights	Negative, shocking, causing threat and turn away of participants.
8. Out of threadwheel/Kiszálltak a mókuskerékből	neutral, promoting, solution-oriented	neutral-negative	factual-argumentative	Sufficiency, simple, eco-friendly lifestyle, community	Negative, boring, old-fashioned, too nostalgic. Felt not relevant or applicable at all.
9. Six degrees could change the world	negative, fear-appeal	negative	factual-argumentative	climate change	Negative, frightening but evaluated as professional. Felt distanced.
10. Straw bale building/Szalmabála építészet	neutral, promoting, solution-oriented	neutral	factual-argumentative	sustainable buildings, natural material, health, locally available building material	Negative, boring, old-fashioned, not relevant.

The most successful videos in regards to engaging and guiding focus group participant to the next stage of behavioural change (from the stage of contemplation to preaparation or taking action) were – based on the focus group discussions and the follow-up surveys – the "Hogyan legyek jo no" videos with their presence on Facebook (see more results on these in chapter 7) and the Jamie Oliver videos. A clearly visible difference in the emotional content and message and their effects on viewers was seen in case of the three versions of the videos involving Jamie Oliver. The most powerful version included the "fear-and-threat" approach with gaining the immediate attention of youngsters (he used very powerful images and presentations of issues such as bringing the yearly amount of sugar on the stage in a wheelbarrow and spilling on the stage), followed by the explanation of the need for healthy and high-quality food with facts about challenges and solutions concluding with a positive, empowering message in a passionate style for the youth. At the same time, communication with the "fear-and-threat" seem to be only effective to gain the immediate attention of viewers, if it remains the centrepiece of the video, viewers turn away and feel frustrated and helpless (as shown for example in case of the vidoes "six degrees" and "mad sausage" where participants felt frustrated and irritated after watching the video, also not remembering any of the fear-focused vidoes in the follow-up survey). Many of the respondents watching the video said they have to watch it and show it to friends and a family. During the discussion all participants emphasized their interest to start school gardening and to get advice (e.g. from Jamie Oliver videos) on healthy eating and cooking. Based on the results of the focus group discussions, a promising intervention would be to start sustainability initiatives at school, especially in the domain of food as it does not only generated a high level of interest and attention of youngsters but they clearly articulated the need and their willingness of sustainable food initiatives at school.

The other successful videos are connected to the fashion model Nora Takacs and her Facebook site (an exploratory study on this Facebook site is to be found in chapter 7) on natural, more healthy and environmentally friendly self-made cleaning, beauty and decoration products. Respondents liked the simple, useful tips and clear guidance of the role model for many young women. Based on the focus group discussions and on the result of the follow-up survey, many of the viewers visited and subscribed to the Facebook site after the discussions and tried out the ideas presented by the sender, even male participants of the research got enthusiastic about the new practice and convinced family members to try out for instance the natural self-made shampoo. The possibility of two-way communication offered by the internet and especially of social media (e.g. the "Hogyan legyek jo no" site) is of key importance as consumers adopt new practices and lifestyles as part of the wider society influenced by peers, family members, friends, colleagues or even virtual communities. People engaged in new practices act as facilitators or hubs of information (e.g. Nora Takacs, fans of the website or the focus group participants).

Another important factor was the relevance of the topics presented. For example, the "local community vision" video (ecotainment) failed to show the everyday relevance of the vision on the video or the "Szalmabala/straw bale house" building and "out of the threadwheel" did not fit into the life phase of teenagers, therefore, even if it had a positive emotional appeal, did not engage viewers in a discussion or even in any follow-up activity. Based on the results presented in the table above, it is obvious that some topics (or the way these are presented) are not relevant for youngsters at all. Even the ecotainment format "urban gardening" video had a weak effect – as youngsters felt less the importance for such an initiative, especially for those coming from the agglomeration of Budapest or from villages. In the latter case, gardening or farming was seen rather as something not trendy, viewed as a non-lucrative hassle for many young participants and requiring returning to the past from decades ago. It is assumed, that the

effect of the video would have been different among youngster living in the dense city centre of Budapest.

We can also conclude that the control group watching more neutral, factual-argumentative and fear-appealing videos ("Six degrees", "the real bears" and "mad sausage") left the focus group discussion with a high level of disappointment and irritation. One of the respondents even told after the discussion "That was it? I was told it will be interesting…ehhh. What was the purpose of it?" Most participants in the control group felt the same way and have not signed up to participate in the follow-up survey. As in the study of Lorenzoni and Pidgeon (2005), at the focus group discussion it was visible how people distance themselves from environmental the risks and negative consequences psychologically. While it has made participants aware of the problems, without the message of efficacy people felt powerless and helpless, what is well supported by O'Neil and Nicholson-Cole (2009) as well.

The results show that the ecotainment/sustainment approach can help to make young people aware of sustainability topics, attract their interest and easily engage them at the early stages of behaviour change even if they have not heard of sustainability and had no interest towards it (the majority of respondents belonged to the pre-contemplation stage who were not able to define sustainability at all). At the same time, the results also show that some other elements and characteristics are as important as the emotional effect of the visual material. As the current research did not intend to carry out an in-depth analysis of the weight of these other factors and the research design does not allow them to be treated thoroughly, this should be subject for further research.

The envisioning workshops provided a good background for not only the selection of the videos to be investigated, but also for the interpretation of the results gained from the focus groups and questionnaires as well as to identify what topics attract the interest of young people. The topics mentioned (and especially those that have been supported with examples and ideas of youngsters) during the envisioning workshops generated clearly higher interest,

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especially if these were presented in a style that was spoken in the "language of youngsters" or by a person they found inspiring and credible (such as a more ethical world presented by José Mujica or taking care of children eating in a healthy way by Jamie Oliver).

Based on the results gained from the envisioning workshops, and the questionnaire and focus group studies, it is clearly visible that the themes healthy eating and healthy food, easily available and low-cost everyday practices (such as the natural shampoo shown by Nora Takacs) are very popular among young people. Based on their life-stage, topics such as more sustainable travel tips and practices, cooking and food preparation from local and seasonal ingredients, ethical and social initiatives towards supporting and keeping small communities alive could potentially also reach a large number of young people.

The results obtained through the analysis presented in this chapter provide several learning outcomes and show various critical factors for the engagement of youngsters through sustainability communication. First, not all focus group discussions could confirm the effects expected from the selected videos (e.g. in case of community gardening). In many cases, the emotional effect was smaller than expected (e.g. the city on bike). Second, based on the results of measuring the emotional effects of the videos, we can conclude that the emotional is heavily dependent on whether the target group can associate or relate itself to the theme presented (e.g. the communication worked less in case of community gardening and biking in the city versus in case of healthy food, especially in case of children and teengers, where focus group participants felt heavily addressed), the style and wording used in the videos (e.g. Jamie Oliver and young models were more appealing) as well as the design and music used in the videos.

7   Exploratory research on a selected lifestyle oriented social media site incorporating sustainability content

The current chapter describes an exploratory analysis of a social media/Facebook site focusing on beauty and wellness of women integrating sustainability messages and topics in its communication. It aims to identify factors that influence the success or failure in communicating sustainability messages and their effects on intentional behaviour change and explore the potential of new forms of environmental communication to consciously shift consumer behaviour towards sustainable consumption among consumers less interested in sustainability.

This exploratory research was based on the combined usage of two different methods: netnography was used to analyse online user groups and network analysis to analyse data on users, comments and categories.

7.1 Findings of the combination of netnographic and network analysis methods

7 videos have been selected on the "Hogyan legyek jó nő" Facebook page on environmentally friendly beauty and cleaning tips and solutions. All the selected videos were presented on television and also uploaded on youtube.com and videa.hu. In total, 323 comments were collected on the videos from 192 unique users on Facebook. The detailed information on the videos is available in the following table.

Topic	viewers (online)	likers	shares	commenters	comments
cleaning	28.000	192	45	19	22
hair spray	54.000	183	24	16	21
hair gel	35.000	129	19	15	15
sugar wax	95.000	304	32	42	52
beer	38.000	177	11	27	37
deo	n.a.	306	24	26	37
shampoo	127.000	213	25	78	139

Table 29. User activity on selected videos of the "Hogyan legyek jó nő" Facebook page

The comments were collected and analysed with CytoScape, a network analysis software. The method for the data collection was manual, meaning that all comments were copy-pasted from Facebook and/or YouTube to a text editor. After processing and deleting irrelevant lines (such as the date of the comment) the dataset was transferred to an excel table with the following columns used:

- From: the name of the commenter as an unique identifier

- To: the name of the referenced user, if any. In some cases the referenced user could be identified by checking the "to" prefix before the name. In majority of the cases identification of the referenced user was only possible by checking the content of the comment

- Comment: the text of the comment

- Topic: the short identification of the video that the comment was related to

Following the data transfer the analysis started with manual evaluation followed by categorizing the content of the comment according to the description below. The reason of manual evaluation was the nature of Hungarian language (it is using affixes that makes all kind of machine based text mining extremely difficult) and the specific language used by the commenters (emoticons, slang, abbreviations, etc.). Finally, two new columns, namely the stage category and the content category, were added to the dataset.

CytoScape, a free and open source network analysis software (http://www.cytoscape.org/) was used to analyse data on users, comments and categories. The software is able to import csv files (csv is the abbreviation of Comma Separated Values) with information on the nodes (users) and edges (connections) between them. It is also possible to import different attributes of the nodes or edges. In case of this research, all information based on the comments' evaluation (stage, content) was imported as node attribute. The software enables the user to calculate different metrics on the data file, such as the number of connections, number of incoming and outgoing edges (indegree and outdegree) and to visualize the result by changing colours, shapes and size of nodes, edges and labels accordingly. It is also possible to modify the default network layout by grouping the nodes according to different attributes helping the analyst to evaluate the results.

During the analysis, it was possible to identify the users (commenters) and the connections among them (answering to a comment). Categorisation of the comments was based on the stages of change model and on user responses as follows:

The first categorisation was based on the **Transtheoretical Model of Behaviour Change** (Prochaska and DiClemente 1984). According to stages of change model, behaviour change proceeds through a series of stages, involving the following 5 steps (as outlined in the literature review):

- precontemplation,

- contemplation,

- preparation,

- action and

- confirmation.

The second is describing the comment's content according to the following categories:

- Negative comment

- Positive comment

- Information seeker (asking for additional information)

- Information hub/Active in spreading information (giving additional information based on previous experience)

- Other/not relevant to the topic

The following tables show the total number of comments in the specific groups. As it can be seen, 39% of the comments could be categorised in the contemplation stage, 11-11% into the preparation and action stages and 16% to confirmation. The other dimension shows that 21% of all comments were about sharing experiences, 19% about asking for help or for more information. Almost 20% of the comments were positive, while only 8% were negative. A vast majority (70%) of the comments in the confirmation stage were about spreading additional information, while contemplation stage comments were about asking questions and seeking additional help from others (76%). In total 6% of comments were negative even without a previous action and an additional 3% communicated a negative message after trying the promoted action.

	information hub	information seeker	negative	positive	other	Grand Total
precontemplation		1				1
contemplation	5	47	18	20	36	126
preparation	7	8		21		36
action	8	6	8	12	2	36
confirmation	46			5		51
not defined			1	2	66	69
Grand Total	66	62	27	60	104	319

	information hub	information seeker	negative	positive	other	Grand Total
precontemplation	0%	0%	0%	0%	0%	0%
contemplation	2%	15%	6%	6%	11%	39%
preparation	2%	3%	0%	7%	0%	11%
action	3%	2%	3%	4%	1%	11%
confirmation	14%	0%	0%	2%	0%	16%
not defined	0%	0%	0%	1%	21%	22%
Grand Total	21%	19%	8%	19%	33%	100%

Table 30. Viewers' reactions on the selected videos on Facebook according to their stage of behaviour change

The CytoScape software enables to easily calculate the indegree (number of comments/connection towards the given user) and outdegree (number of comments/connection from the given user) of each user from the exported dataset. These two attributes are describing well the importance of the user: a user with high outdegree can be an *information hub* who likes to spread and share information with others. However it does not mean that the shared information is of importance for others. A user with high indegree is someone who is trusted and asked/referenced often even if the user does not like to share his/her opinion frequently or widely. A user with high indegree and high outdegree is usually a central actor in all social networks or groups.

The following visualization shows the network of commenters grouped by the topic of the videos. The colours of the nodes represent the indegree (re-comments/references) from green to yellow, while the node size represents the outdegree (number of comments). The increasing size and intensity of the colour of the yellow node shows the importance of the individual's role in the network (the bigger and stronger the colour, the node is playing a more important role) – the moderator (in most cases the Nora Takacs) is placed in the middle of the chart. The edges show the connections (incoming messages) between the users.

In most of the topics users discuss the topic mainly with the moderator (asking for more information, see details later), the number of peer-to-peer communication is low. In case of the shampoo video, a lively discussion takes place between the users where the moderator is not participating at all. The discussion mainly covers the ingredients of shampoos – the actor, Nora Takacs starts the film by sharing information on the negative effects of ingredients used in regular shampoos – this opinion is challenged later by a viewer and commenter, however, other users take a protective side towards the moderator and strike back. We can also identify

another user in yellow with high indegree – she is asked to share more information on her recipe in private messages.

Visualization of Hogyan Legyek Jó Nő videos' commenters and comments by topic
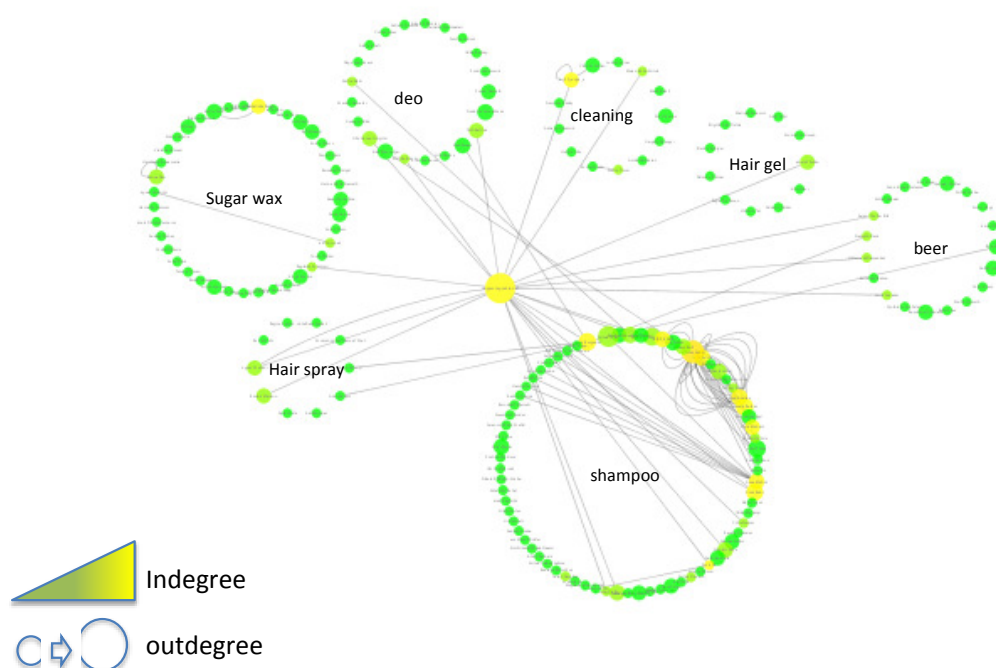
Figure 54: Visualization of Hogyan legyek Jó Nő videos' commenters and comments by topics

The following visualization presents the same users and comments with a different kind of grouping – centrality. The visualization helps us to identify the most important users in the network based on their incoming and outgoing communication. We can clearly identify three groups with a higher size – the majority of the users are "peripheral" in the network as they only have one comment and a low number (1-2) of incoming messages. The second and third user groups have higher number of comments and incoming messages. We can also see the key actors in the network of the videos' commenters with huge number of incoming and outgoing comments. These users are the most influential members of the network, therefore, in communication and marketing campaigns these individuals may be approached to share and spread additional information. This visualisation does not describe their opinion at this point, only their role in the network.

Visualization of Hogyan Legyek Jó Nő videos' commenters and comments by centrality

Indegree

outdegree
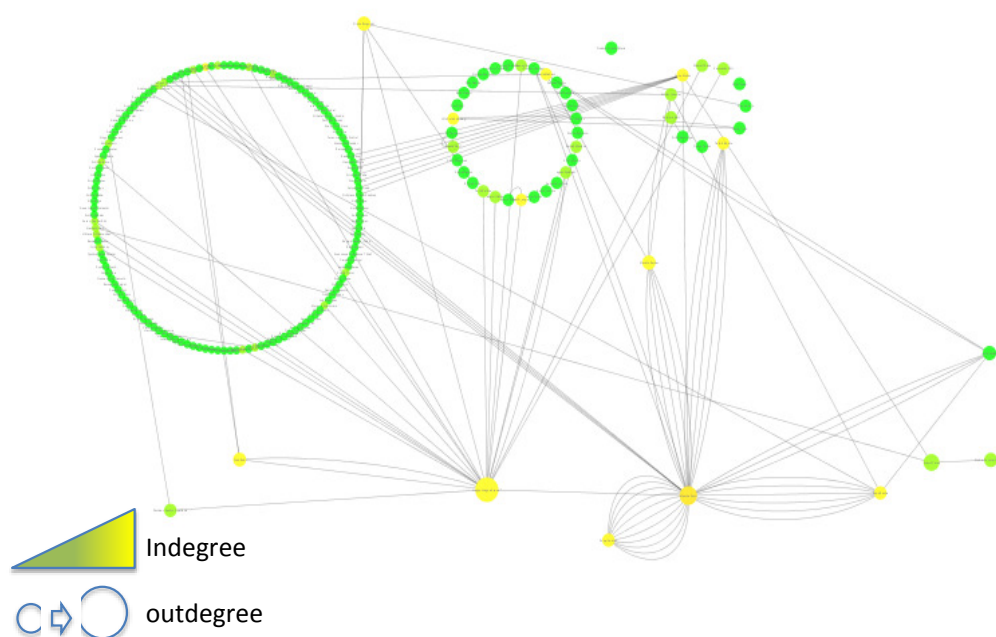
Figure 55: Visualization of Hogyan Legyek Jó Nő videos' commenters and comments by centrality

As the previous visualization helped us to identify to most important users in this network, in the following step the grouping and categorization of comments and users will be done according to their stage of behaviour change and opinion related to the topic. (The group in blue was not categorized to stages due to the nature of the comment.)

In the centre of the following chart we can see users with previous experience in the covered topic (red nodes). The majority of edges are linked to these users as they are acting as a kind of information hubs (46 out of 51 users in the confirmation stage) and sharing their ideas and experiences with others. The rest of the group (5) is only expressing their positive feelings towards the subject.

On the top-right corner we can see users in the contemplation stage – their awareness has been raised successfully, but they still need confirmation and feedback to try out the presented solution. 37% of these users are interested and ask for more information from other users or the moderator, while 14% of them is expressing their negative emotions or opinion about the topic. The above mentioned discussion is visible in this group, members actively try to convince each other. Some users gave comments on the background, such as music or apartment-related issues. These users were also

reached by the video content, but on a slightly different (in most of the cases more aesthetic) dimension.

We can also identify a smaller group in the stage of preparation with stronger motivation to try the presented solution. 60% of the group is already convinced and expressing positive emotions and opinion, while 20-20% is acting as information seekers or sharing information with others.

On the top-left corner we can see those users who have tried the promoted solution (action stage) already. The composition of this group is heterogenic. We can see users sharing their positive emotions (33%), sharing their first experiences and ideas (22%), looking for more information (probably due to unsuccessful first try, but still motivated, 17%). We have also identified users with negative feelings in this group (22%).

Figure 56: Visualization of Hogyan Legyek Jó Nő videos' commenters and comments grouped by stages and content

The following visualization presents the information by a different grouping. In this case the commenters are grouped according to their evaluation of the content and their position on the level of different stages.

The top-left corner shows users sharing information with others. Majority of this group is in the stage of action or confirmation. The group on the bottom-left corner is the group of information seekers. Majority of them is in the stage of contemplation. On the top we can see that negative feelings and opinions are mainly based on recent experience, as most of the members are categorized to the action state. Positive feelings are mainly expressed without any action taken – the video has motivated the audience successfully and a positive feedback is expected after trying out the presented solution.

Visualization of Hogyan Legyek Jó Nő videos' commenters and comments grouped by content and stages
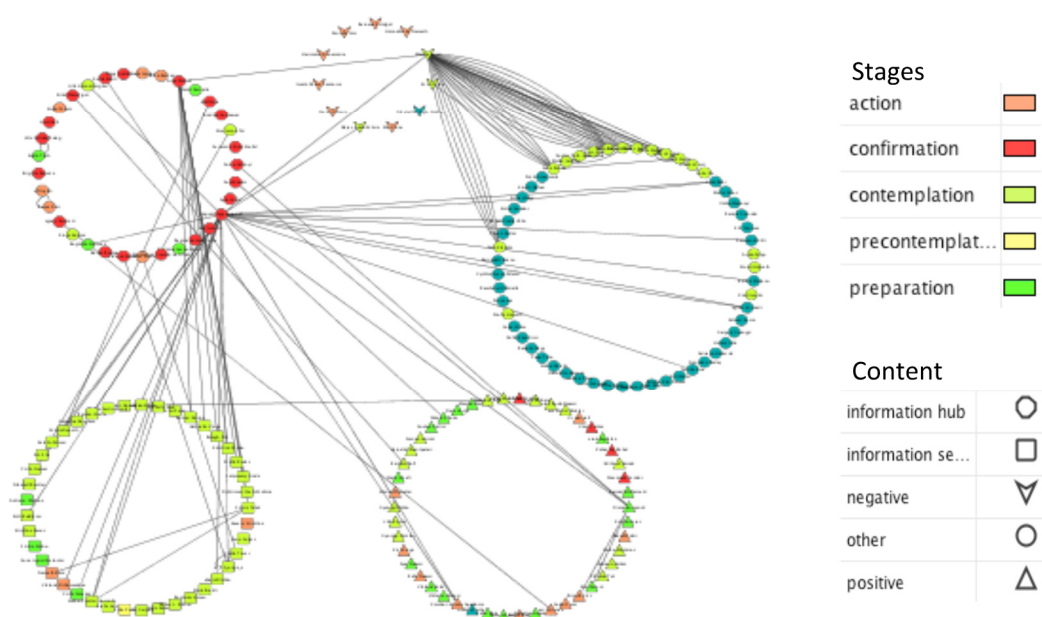
Figure 57: Visualization of Hogyan Legyek Jó Nő videos' commenters and comments grouped by content and stages (the shapes of the forms represent user classification according to the content of their comments; the colours represent the different stages in the behavioural change process)

The visualization below is a combination of influencing factors (indegree and outdegree, i.e. comments and references/mentions) and the opinion shared. The content is visualized by the shape of the node, while its size represents the number of incoming messages; the colour represents the number of comments. According to these settings, larger size and depth of the colour (red) of the red node, the importance of the user is higher in changing other users' opinion. We can clearly identify two users in

this network with high influence. The red one in the middle is the moderator acting as an information hub, spreading as much detail as possible and helping others by responding their questions. The other influential node is the orange one with slightly less comments, but more incoming messages. As we can see this user expressed negative emotions or opinion related to the topic of the video on natural shampoo and generated an intensive discussion on the topic. If the audience should be persuaded, this person's (working in pharmacy and supporting ingredients used in pharmacies for 'regular' products) opinion and persuasion should receive special attention as readers of the comments (not only commenters, but a huge number of those users who have not expressed their opinion) would face a strong positive emotional push from this user as well.

Visualization of Hogyan Legyek Jó Nő videos' commenters and comments
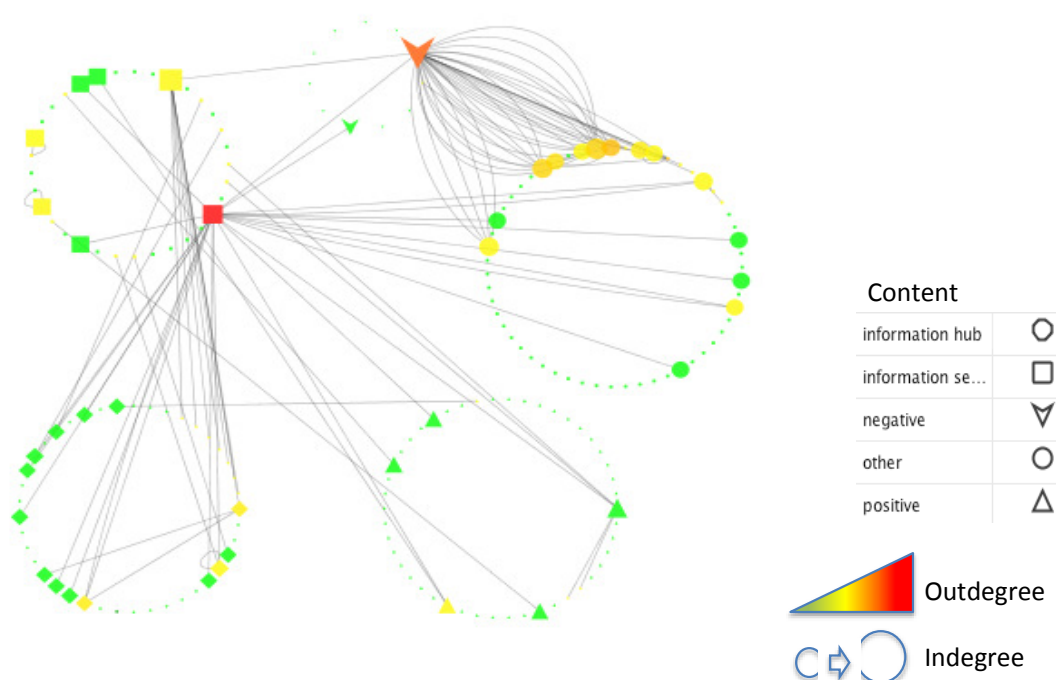
Figure 58: Visualisation of Hogyan Legyek Jó Nő videos' commenters and comments (the shapes of the forms represent user classification according to the content of their comments; the colours represent the number of other users referred to during discussion)

As visualized above, two users are especially relevant – within the community taking part in the discussion – for our research purpose: the red square shows an information seeker searching for information about the use, difficulties and advantages of a certain product addressing the community and involving several users. The user symbolized with the orange

coloured arrow posted mainly negative comments but less users are addressed and responding than in the case of the information seeker. At the same time, the size of this user is rather small.

The visualization helps to identify those members who might need further information, guidance responding to individual concerns or questions or even (for instance in the case of the "Hogyan legyek jo No" topics in person or group events, trainings might be offered) hands-on experience can be offered.

7.2 Summary and discussion

Based on the findings on the Facebook page "Hogyan legyek jó nő", it appears a beauty site can successfully integrate environmental and sustainability messages in its communication and stimulate the participation of users, and stimulate discussion amongst them. In accordance with the literature (Kappel and Grechening, 2009), providing feedback on the use and adoption of new practices on social media has a persuasive effect on others that was proven on the site as well by many people asking about others' and the site owner's experiences, their feedback and advice.

One of the six principles of influence and persuasion of Robert Cialdini (1993), namely 'social proof' (conforming to the behaviour others do around us) (along with the other principles reciprocity, commitment and consistency, authority, liking and scarcity) can also be visible in online communities as users stimulate and convince (or even initiate competition with) each other to try out new practices. This is especially the case, if the number of participants reaches a critical size and is large enough to mainstream the new practices – while there has not been a huge "mass" of people for the specific posts investigated, the followers of the site and topics close to the main areas investigated are very high compared to other lifestyle oriented Hungarian social media sites. Social proof relates here confirming the proper or appropriate way of responding to the needs addressed on the social media page (eg. an attractive woman is not only taking care of her outfit but also of her health and the environment) or in the videos. Here, people look at others' behaviour (especially that of role models and central users in the node) and try to confirm this behaviour through their (new) practices. By employing positive communication and involving positive emotional elements, appeal and experiences, users can more easily stimulate and convince each other to try out new, more sustainable practices, products or services. By articulating the benefits (such as health related, financial or environmental) and (possible) positive outcomes of new,

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sustainable practices experienced, proven by the audience or presented by a credible and well-known 'sender', respondents clearly felt more persuaded by the message.

Sharing experiences on the selected Facebook site provided a positive feedback to participants; many raised questions and initiated discussion on their fear and expectations, as well as experiences to their peers. It also allowed people to see what similar-minded users and friends are doing or experimenting allowing the social comparison with others.

The videos produced are short and provide very small, easy steps and tips to try, which allows users to overcome time constraints and efforts towards discovering and trying new practices. The producer and actor of the videos is a trusted and well-known fashion model who acts as a role model for the majority of the members of her TV program and Facebook page. Social media sites are also a good platform to guide consumers through the different stages of behaviour change with making them aware of a problem, helping them in an easy way to try out new practices, share their experiences and encourage others to take action, confirm the actions and regularly update each other with their feedback and further ideas. The internet and social media can help to mainstream sustainability messages and sustainable lifestyles (Reisch, 2001, Reisch and Bietz, 2009) and achieving behaviour change.

Social media sites like the "Hogyan legyek jó nő" Facebook page might have the potential to successfully stimulate small behaviour changes that might organize smaller or larger groups of consumers – even those who are not primarily interested in sustainability or environmental topics – into a mass. The unique power of such social media sites lies also in their ability to bring people together who would otherwise not be able to get connected to each other, especially not in such a large group size and not all people might ask questions, opinions or feedback on certain issues (but might feel to do on social media sites where like-minded people come together).

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Based on the positive feedback and experiences, the owner of the site started to set up a small shop with the intention to sell beauty products primarily made of natural ingredients (as introduced on the website and social media site). This development might show the potential for social media initiatives to help push demand (Tsimonis and Dimitriadis, 2014).

8 Conclusions

This chapter summarises the findings of the research, concentrating on the analysis carried out in the different empirical phases and to providing answers to the main objectives and research questions of the thesis.

The *first objective* of the research aimed to study **values, needs and worldviews** around a desirable sustainable future of young people and understand current conceptions of a sustainable future among young people and the (baseline) importance of sustainability for them, through the questionnaire study and envisioning workshops. For changes towards adopting not only more efficient but also more sufficient lifestyles, consumers have to be willing to adopt changed patterns and structures of consumption and even changes in deeply rooted values. A good example could be found during the envisioning workshops where students were for example generally reluctant to share their belongings and equipments instead of ownership or found it difficult to imagine new ways of living. These are often perceived by consumers as opposite to current values, habits and traditions, unappealing and demanding, as well as various costs for individuals such as reduced comfort or financial and time efforts that have to be done by the acting individual whereas all benefits resulting from behaviour change will be externalized to the society as a whole. Therefore, the learning and change process has to provide responses to the everyday life of individuals.

When discussing sustainability, our current living and future prospects, the majority immediately points to crisis in almost all areas of our life: crisis in culture, economics, religion, society, politics and the environment. This crisis is felt directly on the individual level of students: most of them reported feeling the economic crisis in their family, which guides everyday decisions they make both in terms of consumer decisions or in trying to

maintain their social relationships (pointing especially to the desire for a better work-life balance and having a meaningful job).

In terms of the environmental and social crisis, youngsters see the need for immediate action and changes in consumer behaviour, but feel powerless and helpless and do not believe in the power of individual actions. The community within school and the place they live in is especially important for all youngsters who participated in the research and one of their largest fears was to lose this community after graduation from highschool. As the school – with the leadership of a few enthusiastic teachers in organizing programs targeting the region and attracting country-level attention in the fields of environmental and social responsibility (but not defined as such) – involved many of the students in programs and events of environmental and social responsibility, the influence and power of group- or community-level actions proved to be influential for the majority of students at the specific school.

Based both on previous findings and the survey carried out in this research, the targeted age group does not look more caring, community oriented or active politically than other generations (if we compare it to the average or other groups of society, see results of the Readership survey carried out annually) and their engagement in protecting the environment shows a large level of passivity and powerlessness. On the other hand they seem to be engaged and active in volunteering and involved in community activities (especially at school).

At the same time, youngsters are seen today as the source for rapid, fundamental changes, coming from people 'not socialized to the status quo'. These young people are (expected to be) geared to make radical changes and have new perspectives that are sought and required to give answers to the challenges of sustainability. Young people are often framed as key actors in encouraging sustainable lifestyles and achieving a more sustainable society. This role has been emphasized by both researchers and policy-makers (Forum for the Future 2008, Juris

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and Pleyers 2009), called by some either as champions and engines of a more sustainable future or the most hedonistic and egoistic generation ever. These conflicting approaches should probably not be surprising. The consumption patterns and habits of young people and youngsters' relationship with sustainability are undoubtedly characterised by contradiction and contestation. In part, this is symptomatic of the fluidity of youth identities and the shifting priorities that characterise this group (Skelton and Valentine 1998; Valentine 2003; Worth 2009). While youngsters' role is inherently high on the agenda of consumption research, their desires, role, agency and responsibilities in sustainable consumption research remains still low (as the latest calls of the European Union Research Framework Programme, eg. the H2020-YOUNG-SOCIETY-2015 also reflect calling for the analysis of the perspectives of young adults of different ages and genders, and coming from different geographical, socio-economic, ethnic, cultural and religious backgrounds). But as seen over the last few years, youngsters increasingly organise themselves and create social innovation networks and intiatives (Dellaporta, 2006). Many of the focus group participants were also part of these new forms of initiatives taking a clear stand for the support of disadvantageous parts of the society or the environment (e.g. using 15.000 plastic bottles for building up a 25 meter long dragon and selling it at the most popular music festival, 'Sziget' in 2013 and 2014). As often reflected during the envisioning exercises, new initiatives may be the result of dissatisfaction with current political and mainstream decision-making processes and on the other hand, these can also represent the desire and willingness of youngsters to transition towards a more sustainable future.

At the same time, we can conclude that the envisioning exercises had a significant learning effect. After the discussion the youth was not only able to put sustainability into context but could easily understand how current and future lifestyles influence our future, what the role of individuals and society for sustainability is. Shortly after the envisioning exercises teachers at the school reported about the "success" of workshops in the increase of sustainability

knowledge of students. Many of the teachers repeated the workshops in their classes involving almost all their students in the exercises.

One of the main findings of the research was that youngsters do not know what sustainable development covers and a long introduction and discussion was needed at the beginning of the envisioning exercises carried out. The envisioning workshops helped to discover the meaning of sustainability for the youth even if they did not have any straightforward connection with the term. The majority of students seem to be pessimistic, anxious about their future and somewhat pessimistic about their chances (esp. entering university, starting work, etc.) in the near and even longer term future. This view was reflected at many places and phases of the workshop. The majority of students in each workshop stressed that without a global crisis people will not change their behaviour and without behaviour change we would experience a global catastrophe destroying the current system. The crisis or catastrophe described was environmental, economic and socio-political. Suggestions of participants pointed to immediate interventions coming from the government in the form of strict regulations, taxes enforcements especially in the areas environmental degradation/protection, health and food safety. Some students took the opposite side and suggested to use positive enforcement and incentives, at the end a good mixture was proposed. While students clearly called for immediate action from the government (in the articulated visions as well) in the future, in the present they were pessimistic and disappointed towards politicians and the activities of the government (both past and current). It was clearly visible here as well, that environmental protection and our future is more connected to "threat and fear", crisis, pollution as well as helplessness and powerlessness on the individual level, that makes the communication (next to other kinds of interventions) empowering the youth clearly important.

In all visions about a desirable sustainable future technology, ethics and community had an important role. Youngsters displayed an ambivalent feeling towards technology, as it is something they welcome; on the other they were afraid technology would take too dominant

and uncontrollable a role in the future. The local community vision was shared and welcome for the majority of students, but it was very much associated with an extremely simple life and the current state and reality of poor villages along the country. Another important aspect of all visions was the importance of a work-life balance and having a meaningful life and work. All these results are important messages to consider when designing communication towards sustainability and targeted to the youth.

Objective 2 was to critically *analyse the nature of contemporary sustainability communication* messages of entertainment education, future visions of a sustainable life and the `ecotainment/sustainment` (Lichtl 1999, Reisch 2009) concept in selected visual communication material and web 2.0 formats and social media aimed specifically at hard-to-reach consumers.

Based on the review of and selection process for relevant and appropriate visual materials, the lack of adequate visual media coverage of the different sustainability issues identified by youngsters was clearly visible, especially in the Hungarian language. Following the goal of the research, visual materials were screened, selected and reviewed based on their communication approach and format. These characteristics also give insights on the trends of currently available and used materials on the functions of these communications and the norms on how sustainability issues are presented. Most of the available material was factual-argumentative and sensational, focusing on disaster events, catastrophes and conflicts (pointing to bad ones and good ones), using fear-appeal. The material was often either too complex or could not present an in-depth understanding (and context) of the issue presented. Another weakness encountered was the poor quality of the way of presenting the respective issue – either the style, the language used or the visual presentation.

As the risks and negative consequences of environmental problems are not always observable on the individual level, people distance themselves from the issues psychologically (Lorenzoni and Pidgeon, 2005). "Fear and threat" approaches have also been predominant in communicating risks of environmental pollution and climate change. Risk perception is heavily influenced by affective components (Epstein 1994) and the fear-appeal tries to guide behaviour and elicit behaviour change through communicating danger on the community or individual level. While fear appeals make individuals aware of problems, without messages of efficacy, fear evoking communication will remain unsuccessful as it causes the feeling of being powerless and helpless (O'Neil and Nicholson-Cole, 2009). This has been proven during the focus groups as well both in cases of entertaining messages (e.g. "mad sausage") and more factual-argumentative (e.g. "six degrees") messages applying the fear-appeal. Based on the comparison of the three versions of the Jamie Oliver video, a promising approach activating less interested viewers could be with visual material that starts with a shorter dramatic message or picture, followed by entertaining and solution oriented messages and approaches.

Objective 3: Identify factors influencing failure and success for intentions of behaviour change of contemporary sustainability communication messages via analysis of selected visual materials and web 2.0 formats and draw conclusions about the potential of new forms of environmental communication to achieve a conscious altering of consumer behaviour towards sustainable consumption.

According to stage models, behaviour change proceeds through a series of stages that describes five different stages consumers go through: precontemplation, contemplation, preparation, action and confirmation. Based on the results of the research, many of the participants could move a step further in the behavioural change process. This could be observed both after the focus group discussions, as most participants became aware of specific

issues and moved from the precontemplation to the contemplation phase, or even some of them to the preparation phase. The same process could be seen on the social media site as many commenters and followers moved from the precontemplation to the preparation or even to the action phase.

As we could see in case of the social media site (a lifestyle and beauty oriented site, "Hogyan legyek jó nő" Facebook page), it can stimulate small behaviour changes that might organize smaller or larger groups of consumers – even those who are not interested in sustainability topics – into a mass. It can bring people together who would otherwise not be able to get connected to each other, especially not in such a large group size. The selected social media site has proven able to bring youngsters a step further in changing their behaviour by focusing on lifestyle, wellness and beauty issues while incorporating sustainability related messages.

It has to be noted as well, that campaigns and communication interventions carried out in isolation proved to be less effective compared to those that are combined with other community-based interventions (such as community-based social marketing, McKenzie Mohr, 2000). This is also reflected through the findings of the current research as those videos that could not be linked with their themes to the everyday activities and issues surrounding youngsters, were less efficient in communicating their messages.

Based on the findings, a promising intervention would be to start sustainability initiatives at school (and integrate the holistic view of sustainability in education) especially in the domain of food as it not only generated a high level of interest and attention of youngsters but they clearly articulated the need for and their willingness to take part in sustainable food initiatives at school. Another promising approach could be the simultaneous application of informing and nudging consumers toward the desired behaviour with a more facilitating choice architecture to alter their behaviour and making the sustainable choice the easy choice (e,g,

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putting fruits and healthy food at eye level or setting two-sided printing as the default in a computer's printing settings) (Sunstein and Reisch, 2013, Olander and Thøgersen, 2014).

Based on the evaluation of the videos – both their content and effects on respondents – the most successful and promising approach proved to be the start with fear-evoking images and messages followed by information provision in an entertaining way by concluding a positive and empowering message and those that provide ideas and practices easy to implement and understand, accompanied by a target group specific style and design and the possibility to belong to a community addressed (e.g. youngsters affected by unhealthy school meals or a specific social media site group).The results indicate that a wider network of factors need to be considered when designing effective communication materials towards the youth. Based on these findings, this proposed communication approach – if carried out in a well-designed, well-targeted and sophisticated manner – combined with possibilities to engage in new practices either via an engaging social media site or initiatives at school can move youngsters from precontemplation or the contemplation stage into preparation or to the action stage successfully. Good examples for it could be found in case of the Jamie Oliver video or the Hogyan legyek jo No site and visual materials.

The findings of the study prove the challenging task of reaching and involving youngsters in sustainability and sustainable lifestyles. At the same time, the ecotainment/sustainment approach, namely using positive emotional appeal while transmitting information in an entertaining way, with useful tips for changing everyday practices promises to be a useful approach in getting the interest of youngsters – if viewers feel addressed by its theme, design and style. However, the credibility, and even more the passionate and inspirational character of the sender is crucial to activate youngsters in accepting new lifestyles or practices who – based on the focus group discussions – seem to be keen on finding everyday heroes to help guide them towards making the right and "legitimate" decisions in their life. This finding puts

further challenges for government-led environmental and consumer interventions and communications as youngsters expressed a deep pessimism and disappointment towards politicians. At the same time, for solving many of the problems identified in environmental and social terms, youngsters call for immediate governmental actions

Next to the credibility and passionate character of the sender, the (every day or life-stage) relevance of the topic and message, the style of the presentation is another crucial factor as well. Based on the latter, youngsters immediately make their decision on watching the communication and getting engaged in further activities or turning away, as it would have been the case with the more factual videos (for instance as in the case of the control group). It was clearly visible in case of the Jamie Oliver videos, where three different versions have been used – a shorter 'neutral' version, an extended version with fear-appeal and a more extended one adding positive, solution-oriented, engaging messages to what extent and in what form emotional and cognitive reactions and effects change.

As the research involved a relatively small sample size and concentrated on one location, the sample cannot be seen as a representative sample of the Hungarian youth. At the same time, there are results that are likely applicable and generalizable for the youth, such as their general thematic interests, their general value orientations and their preferred communication format and style. These findings might also be generalizable for European youth (especially the finding from the envisioning workshops and general value orientations), but less those resulting from the visual material analysed during the focus group discussions. On the other hand, it also became clear during the focus group discussions that some topics can be more relevant in a clearly urban context (and especially in big cities, due to the lower availablility of green spaces) such as the urban gardening project or the biking in cities topic (due to overcrowded, traffic-heavy and polluted cities). Therefore, the research also highlights that communicators need to recognize that youngsters are not a totally homogenous audience and

identifying the appropriate topic and style to use in campaigns is of utmost importance. The interaction and relationship of the themes selected for communication, their style of communication, the life-stage, living circumstances and value orientations of youngsters are all relevant and consistent with the stages model of DiClemente and Prochaska (1992), suggesting that the most effective communication approach depends on the respective stage of change of the target audience.

By analyzing selected visual material communicating sustainability messages and their effect on young audiences, *the research contributed to the theoretical area* of applying the ecotainment/sustainment approach – a social marketing and education approach using positive emotional appeal in sustainability communication – filling the research gap identified in the literature review. It has contributed to the understanding of the role and influence of positive and negative appeal in sustainability communication, to a better understanding of the process of how consumers can move from one stage to another in the stage model of behavior changes and how affective components influence behavioural intentions in the context of behaviour change towards sustainability. It also helped the identification of factors driving or hindering effective sustainability communication towards the youth and by mapping of the visual material, a better understanding was gained of the current state of sustainability oriented communication. Insights were gained on the potential role of social media sites in environmental and sustainability communication enabling a two-way communication between sender and audience and the (potential) role of different participants in the communication process.. Lessons were drawn about the factors of success and failure in more traditional or new communication approaches – involving positive or negative emotional appeal – towards sustainability and behavior change.

The research demonstrated that the ecotainment/sustainment approach to reach consumers who are less interested in environmental and sustainability topics can add to the field of

communicating sustainability. The chosen analytical framework combined two main elements of behavior change research – the cognitive and the emotional processes. It has shown that triggering positive emotions and experiences can influence the involvement in adopting new practices and the perception of the portrayed issues through the visual material studied. It has also proved that transmitting merely factual information is not sufficient and can rather be seen as counterproductive in engaging young audiences. The results also support the assumption, that messages and communication are successful if they relate to real-life situation with locally relevant content with reference to contemporary problems, accompanied by realistic goals and alternatives. Critics of theories focusing on rational decision-making process provided limited insight on how the sender or communicator can help moving the audience from one stage of behavior change to another. Findings of the present research show the crucial role of the communicator in facilitating this process through their credibility, style and personal involvement.

It is important to note as well that the current research explicitly focused on young people among hard-to-reach groups of consumers; therefore, the findings are less generalizable for other hard-to-rearch consumers, as each group has its own specificities, opportunities and limitations. Therefore, other groups need to be studied separately and also addressed separately by communicators trying to reach them.

Nevertheless, the findings give insights and provide support for the potentials of the ecotainment/sustainment approach, especially if it is combined with a two-way communication as it is the case with social media sites and communicated with a passionate, inspiring and credible sender.

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10 APPENDIX I – QUESTIONNAIRE

CENTRAL EUROPEAN UNIVERSITY

(English translation is next to the Hungarian text)

Kedves Résztvevő/Dear Respondent,

Egy, a Közép-európai Egyetemen futó kutatási projekt keretében egy kérdőíves, fókuszcsoportos vizsgálatot végzünk, melynek célja, hogy különböző videóanyagok nézőkre kiváltott hatását vizsgálja, amelynek segítségével szeretném megismerni a kérdőívben feltett kérdésekről alkotott véleményedet. A kérdőív kitöltése megközelítőleg 20 percet vesz igénybe. Az anonimitásod garantált - az általad adott válaszokat nem fogjuk személyedre visszavezetni.
In the framework of a research project carried out at Central European University, a questionnaire study and focus group research Filling in the questionnaire takes around 20 minutes. Your anonimity is guaranteed, the responses given by you will not be connected to your person.

A kérdőívet több részre osztottuk. Kérlek, hogy a különböző részekben felmerülő összes kérdést válaszold meg, különben a kérdőívet nem tudjuk kiértékelni. The questinnaire is divided into different sections. Please fill in all the questions otherwise the results cannot be evaluated.

A kérdőív kitöltését és részvételedet előre is köszönöm! A thank you for your participations and filling in the questionnaire!

A kérdőívhez kapcsolódó bármilyen kérdés esetén, az alábbi e-mail címen tudod felvenni velem a kapcsolatot/ In case of any question, please contact me at: Farsang Andrea, e-mail: farsanga@ceu.hu

Születési idődDate of birth:19 ___ ___ / ___ ___ / _____
Év/year   hónap/month   nap/day

Mai dátum/Date: 2013 / ___ ___ / ___ ___
Év/year   hónap/month   nap/day

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Fenntarthatóság, fenntartható fejlődés/Sustainability, sustainable development

1. **Hallottad már a „fenntarthatóság" illetve „fenntarható fejlődés" kifejezést? Ha igen, hol hallottál róla? / Have you heard about sustainability or sustainable development? If yes, where?**

❑ igen/yes_____

❑   nem/no

2. Kérlek, írd le a saját szavaiddal, hogy mit jelent számodra a „fenntarthatóság"./Please describe with your own words what sustainability means for you.

_____

_____

_____

3. Internetezésnél illetve a közösségi média használatánál, milyen mértékben érdekelnek az alábbi tartalmú oldalak: / When surfing on the internet or using the social media, to what extent are you interested in the following topics?

	nagyon érdekelnek/very interesting	Érdekelnek/interesting	nem igazán/alig/ not really	egyáltalán nem/not at all
Természet és állatok/nature and animals	❑	❑	❑	❑
Politika/Társadalom/Gazdaság / politics, society, economy	❑	❑	❑	❑
Közlekedés/Környezetvédelem	❑	❑	❑	❑
Fogyasztóvédelem / transport, environment, consumer protection	❑	❑	❑	❑

4. TV-zésnél milyen mértékben érdekelnek az alábbi tartalmú oldalak: / When watching TV to what extent are you interested in the following topics?

	nagyon érdekelnek/very interesting	Érdekelnek/interesting	nem igazán/alig/ not really	egyáltalán nem/not at all
Természet és állatok/nature and animals	❑	❑	❑	❑
Politika/Társadalom/Gazdaság / politics, society, economy	❑	❑	❑	❑
Közlekedés/Környezetvédelem	❑	❑	❑	❑
Fogyasztóvédelem / transport, environment, consumer protection	❑	❑	❑	❑

5. Értékek/Values

A következő oldalon egy tizenhét értéket tartalmazó lista található. Minden értékhez egy rövid magyarázat tartozik. Jelöld meg, hogy az egyes értékek mennyire fontos vezérelvet képviselnek az életedben. Az egyes értékek fontosságát egy -1 és 7 közötti skálán jelölheted. Minél magasabb számot választasz, az érték annál fontosabb vezérelvet képvisel az életedben.

- -1 bármely értéknél azt jelenti, hogy ellenkezik az elveiddel

- 0 azt jelenti, hogy az érték egyáltalán nem fontos, nem számít vezérelvnek az életedben.

- 3 azt jelenti, hogy az érték fontos. 6 azt jelenti, hogy az érték nagyon fontos.

- 7-es érték egy különös fontosságú vezérelv az életedben. Általában nincs 2-nél több ilyen.

Below you will find 17 values. Behind each value there is a short explanation concerning the meaning of the value. Could you please rate how important each value is for you as a guiding principle in your life?

The rating scale is as follows:

- -1   means the value is opposed to the principles that guide you

- 0   means the value is not important at all; it is not relevant as a guiding principle in your life

- 3   means the value is important

- 7   means the value is of supreme importance as a guiding principle in your life; ordinarily. Tthere are no more than two such values

Your scores can vary from -1 up to 7. The higher the number (-1, 0, 1, 2, 3, 4, 5, 6, 7), the more important the value is as a guiding principle in YOUR life. Try to distinguish as much as possible between your ratings of the values by using different numbers.

1. Változatos élet (kihívásokkal, újdonságokkal és változásokkal teli) A VARIED LIFE (filled with challenge, novelty, and change)	-1	0	1	2	3	4	5	6	7
2. Segítőkészség(mások jólétéért dolgozni) HELPFUL: working for the welfare of others	-1	0	1	2	3	4	5	6	7
3. Környezetvédelem(a természet védelme) PROTECTING THE ENVIRONMENT: preserving nature	-1	0	1	2	3	4	5	6	7
4. Vagyon (anyagi javak, pénz) WEALTH: material possessions, money	-1	0	1	2	3	4	5	6	7
5. Szórakozás(vágyak teljesítése) PLEASURE: joy, gratification of desires	-1	0	1	2	3	4	5	6	7
6. Békés világ(háborútól és konfliktustól mentes) A WORLD AT PEACE: free of war and conflict	-1	0	1	2	3	4	5	6	7
7. Hatalom(felhatalmazás a vezetésre vagy irányításra) AUTHORITY: the right to lead or command	-1	0	1	2	3	4	5	6	7
8. A Föld tiszteletben tartása (harmónia más fajokkal) RESPECTING THE EARTH: harmony with other species	-1	0	1	2	3	4	5	6	7
9. Egyenlőség (egyenlő lehetőségek mindenkinek) EQUALITY: equal opportunity for all	-1	0	1	2	3	4	5	6	7
10.Ambíció(szorgalom, igyekvés a teljesítésért) AMBITIOUS: hard-working, aspiring	-1	0	1	2	3	4	5	6	7
11.Izgalmas élet(stimuláló tapasztalatok) AN EXCITING LIFE (stimulating experiences)	-1	0	1	2	3	4	5	6	7
12. Szennyezések megelőzése(természeti erőforrások védelme) PREVENTING POLLUTION: protecting natural resources	-1	0	1	2	3	4	5	6	7
13. Befolyásolás (hatással lenni emberekre és eseményekre) INFLUENTIAL: having an impact on people and events	-1	0	1	2	3	4	5	6	7
14. Az élet élvezete(élvezni az ételeket, a szexet, pihenést, stb)	-1	0	1	2	3	4	5	6	7

ENJOYING LIFE: enjoying food, sex, leisure, etc									
15. Társadalmi igazságosság(igazságtalanság korrigálása, gondoskodás a gyengékről) SOCIAL JUSTICE: correcting injustice, care for the weak	-1	0	1	2	3	4	5	6	7
16. Egység a természettel(beilleszkedni a természetbe) UNITY WITH NATURE: fitting into nature	-1	0	1	2	3	4	5	6	7
17. Társadalmi erő(másokat irányítani, dominancia) SOCIAL POWER: control over others, dominance	-1	0	1	2	3	4	5	6	7

6. Vásárlói magatartás / Purchasing behaviour

Az alábbiakban a bevásárláshoz kapcsolódóan találsz különböző állításokat. Kérlek, osztályozd

ezeket 1-től 6-ig annak megfelelően, hogy mennyire jellemzőek Rád személy szerint, illetve mennyire

értesz velük egyet. Az 1-es szám azt jelenti, hogy egyáltalán nem, a 6-os pedig, hogy teljes mértékben

egyet értesz az adott állítással. / In the following you can see different statements related to

purchasing goods. Please indicate from 1 to 6 to what extent you agree with these or characterise you.

1 means you do not agree with the statement at al, 6 means you fully agree with it.

		Egyáltalán nem értek egyet/Do not agree at all					Teljesen egyetértek/Fully agree
1.	A fejlett, gazdag országok lakói felelősek a fejlődő, szegény országok lakóiért.	❏1	❏2	❏3	❏4	❏5	❏6
2.	Fontos számomra, hogy többet tegyek a környezetért, mint mások.	❏1	❏2	❏3	❏4	❏5	❏6
3.	A fogyasztási döntéseimmel sokat tudok tenni a környezetvédelemért.	❏1	❏2	❏3	❏4	❏5	❏6
4.	Előnyben részesítem azoknak a vállalatoknak a termékeit, amelyek olyan országokban nem termelnek, ahol megsértik az emberi jogokat.	❏1	❏2	❏3	❏4	❏5	❏6
5.	Kávé, tea vásárlásánál előnyben részesítem a méltányos kereskedelemből származót.	❏1	❏2	❏3	❏4	❏5	❏6
6.	Szívesen vásárolok bioélelmiszereket illetve helyi, magyar élelmiszert..	❏1	❏2	❏3	❏4	❏5	❏6
7.	Rendszeresen vásárolok diszkontboltokban, mint pl. Lidl, Aldi, PennyMarkt.	❏1	❏2	❏3	❏4	❏5	❏6
8.	Vásárlásnál általában a legolcsóbb ajánlatot keresem.	❏1	❏2	❏3	❏4	❏5	❏6
9.	Vásárlásnál nem gondolkodom túl sokat.	❏1	❏2	❏3	❏4	❏5	❏6
10.	Csak egyszer élek, így nincs kedvem a következő generációk problémáival foglalkozni.	❏1	❏2	❏3	❏4	❏5	❏6
11.	Nem a minőség az első számú szempont számomra vásárlásnál, mivel ma minden termék magas minőségi követelményeknek felel meg.	❏1	❏2	❏3	❏4	❏5	❏6
12.	Vásárlásnál pontosan tudom, hogy minek mennyibe szabad kerülnie.	❏1	❏2	❏3	❏4	❏5	❏6
13.	Jól informált vagyok a választékot és minőséget illetően.	❏1	❏2	❏3	❏4	❏5	❏6
14.	Szívesen összehasonlítom a minőséget és az árakat.	❏1	❏2	❏3	❏4	❏5	❏6
15.	A nagybevásárlásokat mindig előre megtervezzük.	❏1	❏2	❏3	❏4	❏5	❏6
16.	Megéri vásárlás előtt informálódni.	❏1	❏2	❏3	❏4	❏5	❏6
17.	Szívesen kipróbálom az újonnan megjelenő termékeket.	❏1	❏2	❏3	❏4	❏5	❏6

18.	Mindig spontán vásárolok.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
19.	A bevásárlás örömet szerez.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
20.	A reklámokat néha kifejezetten szeretem.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
21.	Mindig ugyanazokat a márkákat vásárolom.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
22.	Mindig a kedvenc márkáimat vásárolom.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
23.	Mindig ugyanazokban a boltokban vásárolok.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$

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7. Az alábbiakban különböző állításokat találsz.

Kérlek, osztályozd ezeket 1-től 6-ig annak megfelelően, hogy mennyire jellemzőek Rád személy szerint illetve mennyire értesz velük egyet. Az 1-es szám azt jelenti, hogy egyáltalán nem, a 6-os pedig, hogy teljes mértékben egyet értesz az adott állítással. / In the following you can see different statements related to purchasing goods. Please indicate from 1 to 6 to what extent you agree with these or characterise you. 1 means you do not agree with the statement at al, 6 means you fully agree with it.

		Egyáltalán nem értek egyet				Teljesen egyetértek	
1.	Szeretem, ha sok cuccom van (pl. ruhák, sportfelszerelés, zene, stb.)./ I love having a lot of „stuff", e.g. lots of cltohes, sport equipments and devices etc.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
2.	Ha valamilyen új dolgot veszek vagy kapok, nem szeretek a régivel foglalkozni./ If there is a new trend or fashion, I do not really like (after a short time) my old stuff anymore.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
3.	Egy nehéz nap után szívesen „megajándékozom" magam egy kis vásárlással./After a hard day I like to gift myself with shopping.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
4.	Mindennek, amivel körülveszem magam, kell hogy legyen egy meghatározott stílusa és színvonala./ I pay attention that all my stuff has a certain style and niveau.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
5.	Vásárlásnál fontos számomra az egyediség./When I do shoppig uniqueness is important for me.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
6.	Soha nem vagyok elégedett a dolgaimmal, amik otthon körülvesznek./I am never satisfied with my stuff in my home.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
7.	Mindig olyan érzésem van, hogy valami hiányzik számomra./I always have the feeling that something is missing.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
8.	Ha újdonság jelenik meg egy számomra érdekes termékből a piacon (pl. új mobiltelefon, ruha, cipő, stb.), azt mindenképp meg akarom venni./If there is a new product on the market I like (e.g. new phone, clothes, shoes etc.), I definitely have to buy it.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
9.	Szívesen versengek, versenyzek másokkal./I love to compete with others.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
10.	Fontos számomra, hogy lássák mások a sikereimet./It is important for me that others see I have success.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
11.	Szeretem, ha az emberek felnéznek rám./I enjoy, if people look up to me.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
12.	Fontos, hogy a véleményemet keresztülvigyem./ It is important for me to bring my opionion to force on others.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
13.	Nem szeretem, ha mások véleménye eltér az enyémtől./I do not like if others have a different opinion than mine.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
14.	Fontos számomra a karrier./Career and moving forward professionaly is important for me.	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$

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15.	Néha használni kell a könyökünket, hogy előrejussunk./Sometimes we have to use our elbows to move forward.	❏1	❏2	❏3	❏4	❏5	❏6
16.	A barátaim szerint néha akaratos és önfejű vagyok./My friends say I am stubborn sometimes.	❏1	❏2	❏3	❏4	❏5	❏6
17.	Számomra fontos, hogy a munkámban, feladataim végzésekor utasításokat adhassak./ For me, it is important to give orders during my work and performing my tasks.	❏1	❏2	❏3	❏4	❏5	❏6
18.	Lehetőség szerint mindig a társadalmi helyzetemnek megfelelő autóval járnék./ As far as possible I would always want to drive a car of my status in society.	❏1	❏2	❏3	❏4	❏5	❏6
19.	Szükségem van a másokkal való versenyre, hogy lássam mennyire vagyok jó./ I need competition with others to see how good I am.	❏1	❏2	❏3	❏4	❏5	❏6
20.	Nagyon ambiciózus vagyok és szeretnék mindig jobb lenni, mint a „versenytársaim", legyen szó akár sportról, munkáról vagy a szabadidőmről.	❏1	❏2	❏3	❏4	❏5	❏6
21.	Amit egyszer megmondtam, az úgy is van./ What I said once, should not be changed.	❏1	❏2	❏3	❏4	❏5	❏6
22.	Ha egyszer valamiről meggyőződtem, attól többé nem térek el./ If I am convinced of something, I will not change my opinion.	❏1	❏2	❏3	❏4	❏5	❏6
23.	Alapjában véve nem éri meg mások problémáival terhelni magunkat, úgysem tudunk tenni ellene semmit.	❏1	❏2	❏3	❏4	❏5	❏6
24.	Nem tudok még mások problémáival is foglalkozni, van nekem is elég bajom./ I cannot deal with others' problems, I have enogh to deal with in my own life	❏1	❏2	❏3	❏4	❏5	❏6
25.	Rendszeresen törődöm a társadalom „kívülállóival" (pl. bevándorlók, menekültek, mozgáskorlátozottak, öregek, betegek)./ I regularly help the 'outsiders' of society (eg. Immigrants, refugees, disabled people, the elderly and other disadvantaged).	❏1	❏2	❏3	❏4	❏5	❏6
26.	Ha csapatmunkában veszek részt, általában inkább a háttérben maradok./ If I work in teams, usually I stay in the background.	❏1	❏2	❏3	❏4	❏5	❏6
27.	Nyugtalanít, ha arra gondolok milyen környezeti viszonyok között kell élnie majd a gyerekeinknek, unokáinknak./ It makes me worried if I think about in what environmental conditions my children and grandchildren will have to live.	❏1	❏2	❏3	❏4	❏5	❏6
28.	A generációk között igazságosságnak kellene lennie, a környezetet nem lenne szabad kifosztanunk a jövő generációinak terhére./ There should be justice between the generations, we should not overexploit nature and endanger future generations.	❏1	❏2	❏3	❏4	❏5	❏6
29.	Sört, üdítőt és ásványvizet legtöbbször visszaváltható üvegben/palackban vásárolok./ I mostly buy softdrinks and beers in refundable glasses/bottles.	❏1	❏2	❏3	❏4	❏5	❏6
30.	Hajlandó lennék magasabb árat fizetni az áramért, ha tudnám, hogy az áram előállításához megújuló energiaforrásokat használtak fel./ I would pay more for electricity if I knew it comes from renewable energy sources.	❏1	❏2	❏3	❏4	❏5	❏6
31.	Bevásárlásnál jobban szeretem, ha műanyag szatyrot adnak, minthogy magammal vigyek egy bevásárló szatyrot./ I rather prefer to get plastic bags when I do shopping than carrying bags with me.	❏1	❏2	❏3	❏4	❏5	❏6
32.	Ha további természetvédelmi előírásokat hoznak, a jövőben az emberek nem csinálhatnak majd semmit./ If there will be more nature protection interventions and measures, people will not be allowed to do anything.	❏1	❏2	❏3	❏4	❏5	❏6

I do not have time to deal with others' problems.

Taking care of others is mostly understood as interfering in someone's private life.

Therefore, it is best if we do not interfere in others life.

I think each person on the individual level can do a lot to help others.

Generally, I think it is not worth to deal with others' problems, we cannot really do anything anyway.

Individuals alone cannot do anything with social injustice.

In my work it is the most important to help others.

I want to rest and enjoy life in my free time and not to deal with others' problems.

For me it is important to always finish what I have started to do.

Why should we vote during elections if our votes do not change much.

It is not a big problem if we sometimes disappoint our friends, we cannot always do and be good to everyone.

8. Tagja vagy, illetve részt veszel valamilyen egyesületnek, civil kezdeményezésnek (sport, kulturális, környezetvédelmi, menekülteket, betegeket segítő szervezet, stb.) munkájában, programjaiban? Are you a member of any civil society organisation (sport, cultural, environmental, immigrant services etc.)?

☐igen/yes   ☐nem/no

9. **Pillanatnyi közérzet, érzelmek.**/ Alább több érzelmet látsz felsorolva, mindegyik esetében add meg kérlek, hogy **jelen pillanatban** milyen erősséggel érzed ezeket. You can find various emotions listed below. Please indicate, to what extent you feel them **in this moment**.

		Nem/Not at all					Nagyon erősen/Very much
1.	Aktív/Active	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
2.	Aggódó/Distressed	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
3.	Bosszús, dühös/Upset	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
4.	Érdeklődő/Interested	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
5.	Izgatott/Inspired	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
6.	Büszke/Proud	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
7.	Lelkes/Enthusiastic	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
8.	Figyelmes/Attentive	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
9.	Hibás/Guilty	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
10.	Ijedt/Afraid	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
11.	Éber/Alert	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
12.	Ellenséges/Hostile	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
13.	Jókedvűen izgatott/Excited	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
14.	Ingerült/Irritable	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
15.	Bizakodó/Hopeful	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
16.	Összezavarodott/Jittery	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
17.	Aggódó/Afraid	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
18.	Reményvesztett/Hopeless	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
19.	Elszánt, eltökélt/Determined	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$

Hamarosan egy videófilmet fogunk megmutatni. Arra kérünk, hogy a megtekintést követően a következő oldalon található kérdéseket válaszold meg. You will watch a video very soon. After watching the short film, please fill in the box on the next side.

Videó 1/Video 1

10. Kérlek, add meg minden egyes érzelemnél, hogy milyen erősen érezted azt a **videó megtekintése alatt**. In the list below you can find various emotions. Please indicate for each emotion to what extent you experienced it **during watching the video.**

		Nem/Not at all					Nagyon erősen/Very much
20.	Aktív/Active	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
21.	Aggódó/Distressed	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
22.	Bosszús, dühös/Upset	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
23.	Érdeklődő/Interested	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
24.	Izgatott/Inspired	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
25.	Büszke/Proud	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
26.	Lelkes/Enthusiastic	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
27.	Figyelmes/Attentive	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
28.	Hibás/Guilty	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
29.	Ijedt/Afraid	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
30.	Éber/Alert	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
31.	Ellenséges/Hostile	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
32.	Jókedvűen izgatott/Excited	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
33.	Ingerült/Irritable	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
34.	Bizakodó/Hopeful	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
35.	Összezavarodott/Jittery	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
36.	Aggódó/Afraid	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
37.	Reményvesztett/Hopeless	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$
38.	Elszánt, eltökélt/Determined	$\square_1$	$\square_2$	$\square_3$	$\square_4$	$\square_5$	$\square_6$

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11. Összességében milyennek találtad a videót? / How would you evaluate the video?

Modern	❏	❏	❏	❏	❏	❏	Régimódi/out-dated
Unalmas/boring	❏	❏	❏	❏	❏	❏	Izgalmas/exciting
Hihető/Credible	❏	❏	❏	❏	❏	❏	Nem hihető/not credible
Tartalmilag nem érdekes/Not interesting	❏	❏	❏	❏	❏	❏	Tartalmilag érdekes/interesting
Jókedélyű/good-tempered	❏	❏	❏	❏	❏	❏	Rosszkedélyű/ill-tempered
Nem szimpatikus/Unpleasant	❏	❏	❏	❏	❏	❏	Szimpatikus/pleasant
Lassú/Slow	❏	❏	❏	❏	❏	❏	Gyors/Fast
Igényes/sophisticated	❏	❏	❏	❏	❏	❏	Túl egyszerű/too simple
Érdekes, élénkítő/Exciting	❏	❏	❏	❏	❏	❏	Altató/soporific
Nem szólított meg/not appealing	❏	❏	❏	❏	❏	❏	Meg tudott szólítani/appealing
Jó/Good	❏	❏	❏	❏	❏	❏	Rossz/bad
Szomorú/Sad	❏	❏	❏	❏	❏	❏	Vidám/happy
Komoly/serious	❏	❏	❏	❏	❏	❏	Játékos/fun
Homályos/confusing	❏	❏	❏	❏	❏	❏	Érthető/clear

12. Ismerted már a videót?/Have you seen the video before?

❏ igen/yes   ❏ nem/no

13. Mi tetszett a legjobban a videóban? What did you like to most in the video?

_____

_____

14. Mi tetszett kevésbé? / what less?

_____

_____

15. Véleményed szerint mi lehetett a videó célja, mondanivalója?/What do you think, what was the inention and aim of the video?

_____

Végezetül még néhány kérdés különböző területeken.

28. Az alábbi 5 mottó közül melyik jellemző Rád leginkább? Kérlek, csak <u>egyet</u> jelölj meg./Which of the following mottos is the most characteristic of you? Please choose only one.

❑ Az életemet lehetőleg környezetbarát szellemben élem, akkor is, ha olykor ez nehéz. Szeretnék példakép lenni. A mottóm: saját magunknál kezdeni és nem másokra várni./I live my life in a environmentally friendly way as possible, even if it is difficult sometimes. I want to be a role model. My motto: Start with yourself and don't wait for others.

❑ Nem kell túlzásba vinni, a környezetvédelem polgári kötelesség és tisztesség kérdése. A mottóm: Semmi szélsőséges, extrém dolog – ha kell, akkor mindenki vegyen részt benne./Do not exaggerate, being environmentally friendly is a question of civic duty. My motto: nothing extreme – if needed, everyone should take part in it.

❑ Ha józanul gondolkodunk: Az egyes ember keveset tud tenni. Mit segít az, ha én energiát takarítok meg vagy lemondok az autós közlekedésről? A mottóm: nem eredményez semmit, ha a kormányzat nem tesz semmit./If you are realistic: individuals cannot do much. What does it help if I save energy or give up driving a car? My motto: it does not bring anything if the government will not do its bit.

❑ Na igen, nem tudjuk pontosan, hogy valóban igazak-e a környezeti katasztrófák. De egyébként is, mit kellene tenni? A mottóm: élvezzük az életet, semmi kedvem a pesszimizmushoz, borúlátáshoz. /We do not know whether the environmental disasters are really true. Anyway, what should we do? My motto: enjoy life, I do not want to be pessimistic and depressed.

❑ Egyáltalán nem olyan rossz a helyzet, a környezetszennyezést erősen eltúlozzák. Itt az új technológia, hogy mindent megoldjunk. A mottóm: ha mi jól érezzük magunkat, akkor a környezetnek is jó./It is not that bad at all, environmental pollution is exaggerated. There is new technology that will solve all the problems. My motto: if we feel well, the environment feel well as well.

29. Ismersz olyan védjegyet/védjegyeket, amelyek környezetbarát illetve fenntartható termékeket jelölnek? Ha igen, melyiket/melyek azok?/Do you know environmental labels? If yes, please name them.

❑ igen, mégpedig/yes, namely:

_____

❑ nem/no.

30. Képzeld el az alábbi szituációt: Egy veled egykorú személy egy teli buszon ül, 3 napos túrára felpakolt csomagokkal. Egy idősebb hölgy száll fel a buszra. Szerinted mit fog tenni a veled egykorú személy?/Imagine the following situation: a person of your age is sitting on the bus with bags for a 3-day tour. An older lady gets on the bus. What do you think, what would the person of your age do?

❑ Felkel és átadja a helyét/Stands up and give his/her seat to the old lady

❑ Néz ki az ablakon és úgy tesz, mintha semmit nem vett volna észre/Looking out of the window as he/she would not have seen anything

❑ Egy bocsánatkérő vállrántással ülve marad/Remains seated with a shrug of the shoulders

❑ Megkér egy másik utast, hogy adja át a helyét/Asks another passenger to give his/her seat to the old lady

❑ Semmit/Nothing

❑ Mást, mégpedig/Something else, namely _____

31. Egy másik szituáció: Egy veled egykorú személy látja, hogy egy 4 fős, fiatalokból álló csoport egy másik fiatalt egyértelműen fenyeget. Szerinted mit fog tenni ez a személy? Another situation: A person at the age of yours witnesses a situation when a group of young people clearly threaten another young man. What do you think, what would the person witnessing the situation do?

❑ Gyorsan továbbmegy/Quickly go away

❑ Közbelép/Interfere

❑ Továbbhalad és hívja a rendőrséget/Walk on and call the police

❑ Megkér más járókelőket, hogy segítsenek a helyzetet megoldani/Ask others to help for help

❑ Mást, mégpedig/Something else, namely_____

Kérlek töltsd ki az alábbi demográfiai kérdéseket is. Please fill in the following questions as well.

1. Mit szeretnél csinálni érettségi után/What would you like to do after finishing highschool:
❑　　továbbtanulni/go to university
❑　　dolgozni/work
❑　　nem tudom/do not know

2. Kor/Age:_____

3. Nem/Gender
❑　　nő/female
❑　　férfi/male

4. Hogyan finanszírozod magad?
❑　　**szülők/nagyszülők/parents**
❑　　**állami segítség, intézmény/state funding/insitution**
❑　　**ösztöndíj/stipend**
❑　　**hitel/loan**
❑　　**munka/work**
❑　　**más forrás/other:_____**

5. **Mi állandó lakhelyed településtípus szerinti besorolása?/Where do you live?**
　　　　　　　　　　　　　　　　　　❑　　Község/Village

　　　　　　　　　　　　　　　　　　❑　　Város/ City

❑   Megyei jogú város/County-rank city

❑   Capital

6.   Dolgozol jelenleg?/Do you work?

❑   Teljes munkaidőben (heti munkaidő 35 óra vagy annál több)/Full-time

❑   Részmunikaidőben (heti munkaidő 15 és 34 óra között)/Part-time

❑   Részmunkaidőben illetve óradíjjal (a heti munkaidő kevesebb, mint 15 óra)/Part-time or hourly paid work

❑   Nem dolgozok/Do not work

Rendelkezel jogosítvánnyal?/Do you have a driving licence?

❑Igen/yes   ❑Nem/no

7.   Hány személy él a háztartásotokban, saját magadat is beleszámítva?/How many people live in your household (including you as well)?
❑1 személy/1 person
❑2 személy/2 persons
❑3 személy/3 persons
❑4 személy/4 persons
❑5 és több személy/5 or more

8. Hány autó van a háztartásotokban?/How many cars does you family own?
❑0
❑1
❑2
❑3
❑4 vagy több/4 or more

Köszönöm, hogy kitöltötted a kérdőívet!
Thank you for filling in the questionnaire!

11 APPENDIX II FOLLOW-UP QUESTIONNAIRE

Kedves Válaszadó! / Dear Respondent!

A következő rövid kérdőívvel azt szeretném felmérni, hogy a néhány héttel ezelőtti beszélgetésünk, illetve az akkor megnézett videók milyen emléket hagytak Benned, milyen aktivitást váltottak ki Belőled. / With the following short questionnaire I would like to investigate what you remember of the videos watched at our meeting a few weeks ago and what actions you might have taken during this time.

Az itt megadott válaszaid - csakúgy, mint a korábbiak - csak a többi válaszadó válaszaival összesítve és kizárólag a "fenntarthatóság kommunikációja" című kutatási projekt keretében kerülnek felhasználásra. A válaszod anonim, semmilyen felületen nem jelenik meg a neved illetve bármilyen személyes adatod.Ha bármilyen kérdésed felmerülne a kutatással kapcsolatban, a farsanga@ceu.hu címen tudod felvenni velem a kapcsolatot. / Your anonymity is guaranteed, the responses given by you will not be connected to your person, the responses you give will be used in the frame of the research project „Communicating sustainability". In case of any question, please contact me at: Farsang Andrea, e-mail: farsanga@ceu.hu.

1. A néhány héttel ezelőtt látott filmek közül melyikre emlékszel? Kérlek, az összes filmet próbáld meg leírni röviden (néhány szóban), amelyet láttál a korábbi találkozónkon. / Which of the films presented two weeks ago do you remember? Please try to describe all the films you saw at our meeting with a few words.

2. Kérlek, most részletesen írd le, hogy mire emlékszel azokból a filmekből, amelyeket az előző kérdésre adott válaszodban említettél! / Please describe in detail what you remember from the films you mentioned at the previous question.

3. Mely tartalmat, jelenetet illetve személyt találtad motiválónak, inspirálónak illetve szimpatikusnak? / What content, scene or person was appealing or motivating to you?

4. Meséltél-e illetve beszélgettél -e a filmekről illetve az abban felmerült témákról valakivel a barátaid, iskolatársaid, tanáraid, rokonaid közül? / Did you talk about or discussed the films and topics to any of your peers, relatives or friends?
- Nem/No
- Igen/Yes

5. Milyen hangnemben beszéltél az akkor látott filmekről/témákról? / If yes, did you talk about them in a positive, negative or neutral way?
- Pozitív/Positive
- Semleges/Neutral
- Negatív/Negative

6. Kerestél hasonló témájú videókat, oldalakat az interneten a filmek megnézése után? / Have you searched for similar content on the internet since watching and discussing the films?

- Igen/Yes
- Nem/No

7. Kérlek, írd le, hogy melyek voltak ezek! / If yes, please specify

8. A filmek illetve a beszélgetésünk hatással volt a döntéseidre, cselekedeteidre az elmúlt 3-4 hétben? / Did the films and discussion have any influence on your decisions and activities in the last 3-4 weeks?
- Igen/Yes
- Nem/No

9. Kérlek írd le, hogy milyen területen, milyen formában volt Rád hatással a film, illetve a beszélgetés. / If yes, in what form and asepect?

10. A találkozásunk óta változtattál a szokásaidon bármilyen mértékben az alábbi területeken? / Since our meeting/discussion, have you made any significant changes in your everyday life? (Depends on the content of the films, e.g. in hair care, consumption of local food, healthy diet etc.)

	Igen/Yes	Nem/No
kevesebb gyorséttermi vagy félkész élelmiszer Fogyasztása (less fast food or ready-made food)		
egészségesebb ételek fogyasztása (vásárlás, készítés)/consuming healthier food (purchase, preparation, eating)		
több kertészkedés, saját termelés (more gardening, own production)		
kevesebb hús fogyasztása (less meat consumption)		
több figyelem az energiatakarékosságra (more attention paid to energy saving)		
rövidebb utak gyalogosan vagy bringával (short trips made on foot or bike)		
kevesebb üdítő, cukortartalmú ital Fogyasztása (less consumption of soft drinks)		
helyi élelmiszerek vásárlása (purchase of locally grown food)		

| természetesebb hajápolás, vegyszermentes sampon használata (natural hair care, use of chemical-free shampoo) | |
| egyéb, éspedig Other activities, namely | |

11. Csatlakoztál bármilyen csoporthoz, közösséghez vagy Facebook oldalhoz a kutatáshoz kapcsolódó beszélgetés és filmnézés óta? / Did you join a new network or community on the web since our discussion?
- Igen/Yes
- Nem/No

12. Kérlek, írd le, hogy melyik közösséghez, csoporthoz, Facebook oldalhoz csatlakoztál. / If yes, please specify.

13. A beszélgetésünk óta kipróbáltál bármilyen új, fenntarthatóbb/környezetbarátabb megoldást, tevékenységet? / Have you adopted any new practice since our meeting?
- Nem/No
- Igen/Yes

14. Kérlek írd le, hogy milyen környezetbarát/fenntartható megoldást próbáltál ki. / Please write here what sustainable/environmentally friendly solution you tried out.

15. Elégedett voltál az újonnan kipróbált megoldással, lehetőséggel? / Were you satisfied with the new solution/possibility you tried?
- Nem /No
- Igen / Yes

16. Kérlek, írd le, miért nem voltál elégedett az új megoldással. / Please describe why you were not satisfied (in case respondent answered No to Q 15).

17. A találkozásunk óta, felmerült olyan jellegű (fenntarthatóbb) ötlet, tevékenység stb. amit szívesen kipróbálnál illetve követnél a jövőben? / Has been there any new (sustainable) idea or practice you would like to try out or practice in the future?
- Igen / Yes
- Nem / No

18. Kérlek írd le, milyen ötletet szeretnél kipróbálni. / Please describe here what this new idea or practice would be.

19.   Milyen akadályokat kell leküzdened ezeknek a fenntarthatóbb ötleteknek, tevékenységeknek a kivitelezéséhez? What kind of obstacles or challenges should be solved from your side in order to try out or practie these new ideas, solutions?

12 APPENDIX III VIDEOS SCREENED AND EVALUATED

The real bears https://www.youtube.com/watch?v=myxwCEGcBYc

Attractor car test part 2
http://index.indavideo.hu/video/Attraktor_autoteszt_2_resz?autostart=1&utm_source=flash&utm_medium=relatedvideos&utm_campaign=videoplayer

Jamie's food revolution
http://www.ted.com/talks/jamie_oliver

The city on bikes/Aa város lekerekítve – teaser 1 Bori
https://www.youtube.com/watch?v=N_n3vJL4He8

The city on bikes/A város lekerekítve – teaser 2 tamás
https://www.youtube.com/all_comments?v=jE9onvV9Rpw

Energy saving is sexy/Az energiatakarékosság szexi
https://www.youtube.com/watch?v=MKBzsisxHis

How to be a cool woman? Home-made natural shampoo/Hogyan legyek jó nő? Házi sampon
https://www.youtube.com/watch?v=wIh7Q6dDHec
How to be a cool woman? Home-made cleaning material/Hogyan legyek jó nő? Takarítás
http://www.life.hu/hazitunder/lakas/20121008-hogyan-legyek-jo-no-vegyszermentek-takaritas.html

Local community vision – CRISP project
https://www.youtube.com/watch?v=RD7j8GaltSc

Out of threadwheel/Kiszálltak a mókuskerékből
https://www.youtube.com/watch?v=tAKC5KEFwh4

Cserpes Milk Bar/Cserpes tejivó
https://www.youtube.com/watch?v=JYEjf75THfg

Vegan love story – not available on youtube/internet

Speech of the president of Uruguay/Uruguay elnökének csodálatos beszéde
https://www.youtube.com/watch?v=la8W9_Vgj3E

Watch your day in 2020
https://www.youtube.com/watch?v=OptqxagZDfM

Urban gardening project/Közösségi kert projekt
https://www.youtube.com/watch?v=nUdcCmif6Qs

Mad sausage https://www.youtube.com/watch?v=PNFfJJBwBjY

Straw bale building/Szalmabála építészet https://www.youtube.com/watch?v=8gtlYx3IkMk

Six degrees could change the world v2 mp4
https://www.youtube.com/watch?v=swGx9hDg78I

And what is in your basket?/És a te szatyrodban mi van?
https://www.youtube.com/watch?v=Ck8Ppe1rcIM

13 APPENDIX IV – VISUAL MATERIAL SHOWN IN THE FOCUS GROUPS

Group	Title of visual materials
Group 1	What is in your basket? How to be a cool woman? – shampoo Out of the threadwheel Community gardening
Group 2	How to be a cool woman? – shampoo Cserpes Milk Bar Community gardening Attraktor The vegan love story
Group 3 (control group)	6 degrees Mad sausage The real bears Cserpes Milk Bar
Group 4	Ethical world vision Jamie Oliver 8.00-17.00 How to be a cool woman? - cleaning Community gardening Attraktor
Group 5	Attraktor Watch your day The real bears Jamie Oliver 8.00-17.15 What is in your basket?
Group 6	Uruguay's President The real bears The city on the bike Energy saving is sexy Jamie Oliver 8.30-16.20
Group 7	Uruguay's President Community vision Attraktor The city on the bike Energy saving is sexy
Group 8	The vegan love story Jamie Oliver How to be a cool woman? - cleaning Energy saving is sexy Jamie Oliver 8.00-17.15
Group 9 (control group)	The real bears Out of the threadwheel Strawbale building

14 APPENDIX V – CONSENT FORM (HUNGARIAN VERSION)

Hozzájáruló nyilatkozat kutatásban való részvételre

- Alulírott ………………..………………….(név) önként hozzájárulok ahhoz, hogy részt vegyek a „**Fenntartható életmód kommunikációja**" elnevezésű projekt keretében végzett kutatásban.
- A projektet ismertető tájékoztatót elolvastam és megértettem. A kutatás jellegéről, céljáról, helyszínéről és várható időtartamáról, valamint a felém támasztott elvárásokról részletes tájékoztatást kaptam. Lehetőséget kaptam a kutatás minden aspektusával kapcsolatban kérdésfelvetésre, a kapott válaszokat megértettem. A tanulmányhoz fűződő kérdéseimet megfogalmazhattam, a válaszokat megértettem.
- Hozzájárulok, hogy a projektben való részvételemmel összefüggő személyes adataimat a kutatással kapcsolatos és egyéb kutatási célokra felhasználják. Tudomásul veszem, hogy a megadott, projektben való részvételemmel összefüggő személyes adataimat a hatályos adatvédelmi törvényeknek megfelelően bizalmasan kezelik és dolgozzák fel.
- Tudomásul veszem, hogy személyes adataimhoz csak a projektben részt vevő kutatók férhetnek hozzá, illetve, hogy a projekt végétől számított 5 év elteltével minden hang-és videofelvétel megsemmisítésre kerül.
- Tudomásul veszem, hogy a kutatáshoz kapcsolódó vizsgálatban való részvételből indoklás és hátrányos következmények nélkül bármikor kiszállhatok.
- A részvétellel kapcsolatos döntés meghozatalára elegendő időt kaptam, és a kutatással kapcsolatos intézkedéseket és korlátozásokat betartom.

Diák neve (NYOMTATOTT NAGYBETŰVEL):
Aláírás:
Dátum: