COLLECTION OF PAPERS

for the dissertation titled

Societal perception management in the field of waste management in Hungary
by SOMFAY Dorottya

Consultant:
Prof. Dr KARÁCSONY András
Professor, C.Sc.

Budapest, 2021.
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I. Research antecedents and motivation of the topic

Waste management in Hungary sees a number of transformations year after year, significantly influencing the prioritisation of the various fields of speciality, and in turn, the way these are communicated. The possible outcomes resulting from the various legal and proprietorship changes are as yet unpredictable, but the elite of the trade is nevertheless bears the onus of what extent they are able to influence the present government’s decision makers in positively shaping our society’s relation to waste. The waste pyramid defining and directing the waste management of European countries includes the hierarchy of fields that handle, dispose of, and (re)use wastes. The assessment and level of acceptance of these areas show tremendous variances both among the general population and in professional circles, also demonstrated by the not representative, nevertheless special qualitative niche survey I have conducted.

Within environment protection, waste management has grown into a key area in its own right, with a multitude of lobbying activities connected to it worldwide, and with the ability to directly influence the everyday life of people and businesses. From the aspect of the future of waste management, it is necessary to examine when and how, what, through what and to whom should be communicated. It is necessary to map the attitudes of the various classes of society, to enable efficient communication with them. The question is what means are utilised to achieve this, i.e. what are the driving forces and groups of society in Hungary, and are there any differences at all, or is this region driven by the same set of principles and organisational powers as our European neighbours? What communication means does this field have, how is residential perception shaped, and how should this be supplemented? Does Hungary and the Eastern European region have
any chance of catching up in this area – are we lagging behind in the first place – and if so to what demonstrable extent in comparison to the developed Western European states? If believe it is important to obtain a comprehensive picture of the current societal paradigm shaping process, and in that the communication background, from where a number of conclusions can be derived regarding future tendencies. Below I have drafted the stakeholder map of the area, i.e. the specific forces having significant influence on this profession. Advancing on this basis, I have examined leading officers of the profession, and I have explored the topic using their system of terms and definitions. The research covers ecological communication and in that the opinion of several professional decision makers of Hungarian waste management, by unifying two special research methodologies.

The hypothesis of the research

RH 1.

On the one hand, my hypothesis is built on communication concerns, and in waste management, I see the root cause of the problem in the disproportionate popularisation attempts of waste processing activities. On the other hand, from the social science perspective, whether the coordination of this perception management process is managed appropriately through the societal systems concerned. Here, I see points calling for development along the politics-education axis, and in accordance with my hypothesis, the topic is being deliberately postponed at the highest decision making levels, not receiving the emphasis it should. As I specifically selected the decision makers as the subjects of my research, I had confidence I would be able to map this situation.
RH 2.
In Hungary, the most popular activity promoting environmental awareness in the field of waste management is selective waste collection, which is not expediential in connection with perception management.
My greatest concern and problem prior to my research was the following, which also provided the fundamental hypothesis for my dissertation:
By popularising selective waste collection:
• Will consumers become environment-conscious?
• Will they understand waste management system through this?
• Do they understand the path waste covers?
• Are they aware of the consequences of their waste-related habits?
• Why is only the importance of one particular waste stream is emphasized? Hungarian households consume an average of 125 beverage cartons each year. Only 21% of this, i.e. about 26 beverage cartons are collected selectively and recycled. This proportion in about 35-40 in the member states of the European Union, but in certain member states it can even reach 65 pieces.
Therefore, I examined the focus of communication with the present research, because I believe this is not right and in my opinion, the holistic opportunities the topic hold are not being utilised to their fullest potential in popularising communication activities, it is therefore no coincidence that the attitude change of the population has not shown any substantial change for decades.
RH 3.
According to my hypothesis, the professional elite is most suitable for exploring the hidden correlations; representative research covering the general population would only touch this topic superficially and the system
of notions currently shaping the general situation could not be mapped fully.

Several studies surveyed over the recent years the environmental awareness of students of tertiary educational institutions and pupils of secondary schools and elementary schools, and their attitudes with respect to a particular environmental topic. Several groups of researchers survey at present the environmental attitudes of the pupils attending the forest school, with the help of questionnaires, concept maps and other methods. One such research group (under the direction of Viktória KÖVECSES GÖSI, Bálint LAMPERT, Mrs. Tibor PETZ and Mrs. Lajos CSENGER) examined how young people leaving the public education system think of environmental questions and what behaviour they exercise in their connections with the environment. Data were recorded at nine faculties of Széchenyi István University in September 2019. The objective of the research was to assess the environmental attitude of the first-year students enrolling in the university, concerning sustainability and their knowledge of environmental issues, and to map their behavioural habits and emotions regarding the subject. Therefore, due to the availability of these researches, I did not start any representative research work, as these are available in our field.¹

**RH 4.**

According to my hypothesis, thermal utilisation should be a key element in

¹Viktória GÖSI KÖVECSES, Bálint LAMPERT, Tiborné PETZ, Csenger LAJOSNÉ, Első éves hallgatók fenntarthatósággal kapcsolatos attitűdjének vizsgálata /Examination of the attitude of first-year students towards sustainability/, 12th International Conference of J. Selye University Sections of Pedagogy and Informatics, [http://uk.ujs.sk/dl/3778/Gosi.html](http://uk.ujs.sk/dl/3778/Gosi.html)
waste perception management in Hungary, but does not yet receive the political support it should.

**RH 5.**
The surrounding western states are further down this path according to my hypothesis, and I intended to prove - or contradict - this through research and processing of literature.

### I. Methods used
The objective of the research was to reveal hidden correlations in the field of waste management that influence societal awareness in Hungary and the relation between consumers and waste. It is important to select a research methodology that may exceed the results achieved by depth interviews by exploring such depths in the subjects that the party conducting the research/asking the questions is unable to explore by asking questions compiled beforehand. The key to this is to examine the field in question using the subject’s own system of concepts. The random comparison of the particular concepts prompts the subjects to adapt a way of thinking that brings new aspects, correlations and hidden dimensions to the surface. This allows to explore what can be communicated from the perspective of mind framing and how the profession perceives the priorities and what misconceptions the population holds.

I conducted the research by combining two methodologies, the REP-test (Role Construct Repertory) and the Storyline research methodology. Using these, we described fifteen concepts with the research subjects, identified by the subjects, then they explored the constructs and contrasts of these, and analysed them, supplementing it by telling a case study or story. Finally, I consolidated the results obtained and contextually compared them. Therefore, the topic of the interview was given by the research
subjects, ad there was no questionnaire prepared in advance apart from the REP table. This is the essence of qualitative market research: it is not the researcher who determines the key features (constructs) of the particular topics; they are determined instead by the research subjects, the features of the topic in question being “extracted” from the subject.

III.1.3. Application of the REP and Storyline research methodologies

**REP parameters**

George Kelly was the first personality theorist who regarded the cognitive and informational aspects of human existence as the dominant features of personality. According to his theoretical system titled The Psychology of Personal Constructs, a human is essentially a scientist, who, to achieve efficiency in life, strives to understand, interpret, anticipate and control his personal world. The hallmark of Kelly’s theory is the statement that likens the nature of human behaviour to that of a scientist’s. Kelly’s Repertory Grid Technique is a qualitative market research method that can be broadly applied, although it is not in wide use in Hungary.

The focal question of Kelly’s cognitive theory is: how individuals perceive and interpret people and things in their surroundings. Kelly’s approach called “personal construct theory” focuses on processes that enable a person to arrange and understand the events of his life. His theory is a modern cognitive approach, targeting the examination of the personality. In this respect, the emphasis is on how individuals perceive and interpret people and things in their surroundings. The construct theory focuses on the processes that enable people to understand their psychological living space. From this cognitive perspective, Kelly recommends a personality model based on the analogy that a human is like a scientist. It assumes that a human individual, just as a scientist studying him, establishes work
hypotheses on reality, based on which it attempts to anticipate and control the events of his life. According to Kelly, therefore, life is characterised by people continuously fighting to understand the tangible world of their experiences. Man perceives his world through certain translucent, self-constructed patterns and schemes, and attempts to reconcile these schemes with the reality the world is made up of. These two do not always match perfectly. Without such patterns, however, the world seems to be an undifferentiated, homogeneous unity, which man is unable to comprehend. These “translucent patterns and schemes” were referred to by Kelly as constructs. In other words: a construct is a category of thinking, with the help of which the individual shapes and interprets the world of his/her experiences. This is a consistent way for man to make certain aspects of reality sensible.

According to Kelly, man forecasts and constructs his personal experiences by creating their replicas. The significance of this process lies in that it provides a tangible basis for the individual to build expectations on the probably emerging events and to interpret their meanings. In the early stages of construction, the individual observes the general flow of processes and interprets them. Then he recognises a pattern of the events, and their repetition in a field of experience. Finally, he devises a structure or meaning for the events experienced. This temporal flow of experience, interpretation and construction is known as the process of construction, i.e. the capacity of the individual to generalise his experiences in a meaningful form. The constructs are therefore significant from the perspective of forecast and control, as they enable the individual to anticipate the upcoming events through expectations. Without constructs, the life of the individual would be chaotic; he would not be able to sense the world
consistently. If he were incapable of devising expectations for the future, the ongoing events would become intangible. The personal constructs enable the individual to create some sort of an order, rendering his world foreseeable.

The constructs are not only bipolar, they are dichotomous as well. Kelly imagined that constructs are used as a yes-no nature, and not along the stages of a continuity. While he recognised that people know several dimensional stages, he handled this in a unique way. He presumed that the stages are the products of the organisation of dichotomous constructs. Organisation allows increasingly delicate distinctions, as soon as the higher level dichotomous decisions is followed by new decisions at lower levels. More specifically, when the events are experienced, the person observes that certain events seem to be similar to one another, have common features and are different from other events. This cognitive process of observing similarities and differences leads to the creation of personal constructs. This means that only three elements (events or things) are required for the formation of a construct: two elements of a construct must be detected as similar and a third one as different from the former two. The mode as two elements are created as similar is called a construct or the similarity pole of the construct dimension and as the third element opposes the former two is known as the contrast pole of the construct dimension. It follows from this that every construct has a similarity pole and a contrast pole. Construct theory motivates one to discover how people interpret and anticipate their experiences during terms of similarities and contrasts.

Based on this theory, Kelly developed the REP test to identity the important constructs that an individual uses to construct persons playing
significant roles in the said individual’s life.

Summarizing the above, REP originally is a projective psychological test that targeted the exploration of important categories in the individual construction of social situations. Originally, a so-called list format was developed, later to be further developed into the grid format. To analyse the Grid – although Kelly did set up a mathematical scheme – software support is required, therefore the method could only gain popularity with the development of information technology and applied software. With the help of the method the personal constructs of particular consumers can be explored and their detection and mental maps can be drawn. Its advantage is the quantification of the qualitative results, inherently ensuring the integration of qualitative-quantitative market research. Since the Repertory Grid Technique rather seeks to answer “How?” instead of “How many?”, it helps to establish how a consumer thinks and detects, and what subconscious motivations guide his choices. A key advantage of the method over the interviews is that it completely eliminates the researcher’s influence. In other cases, the researcher would always set out from his/her own system of constructs, inevitably influencing the outcome of the interview.

The research is made up of two parts, first the consumer is requested to select important/relevant notions from the research topic in question. Following this, the elements are examined, three at a time, compare the triades by identifying the feature in which two of the three elements are similar, while the third is the opposite of the other two. This created a dimension, determined by the consumer, on one of whose poles similarity is positioned (similarity of two elements against a third one), and the other pole contains the difference of the third element. For traceability’s sake,
the two similar elements are marked (X), and the third, bearing the feature of difference, is left unmarked. (O) In the test, a notion is compared with others on three occasions in a random manner, based on the points positioned as the array of a matrix.

In addition, the test may also play a useful role in selecting the communication or convincing strategies, as a consequence of which, the parties are aware of the other person’s constructs, or can at least deduce them.

The exploration of the constructs allows to study the dimensions the consumer uses in judging the topic in question. This exploration is however far from sufficient to describe how the system of mental constructs of the consumer functions. Two persons may identify the same construct, and yet we may use it quite differently, and thus, beyond verbal statements, we also find out that they may associate it with different meanings. To explore the use of constructs, the so-called “full grid” must be performed. For this, it is advisable not to regard the similarity and contrast poles of the construct as simple pairs of words, but a five-point scale.

The summary parameters and impressions of my REP research based on the above are:

1. 15x15 mesh, random positioned mesh in a matrix arrangement.
2. Points indicate in the row in question what is being compared to what.
3. 1 concept is compared 3x with the others.
4. The system of test aspects are the constructs and the contrast.
5. The subjects are not influenced in nominating the 15 notions; they define their own scope of concepts within waste management. I considered
this important because examining the topic through the communication expert’s eye, topics and correlations may be overlooked that might have helped the topic advance.

6. The duration of running the survey on 1 subject lasts 60-90 minutes.

7. The start of the survey is a monotonous and slow process, as the majority of subjects clarify the concepts and their background processes and situations upon comparing the first 3-4 of them. About halfway through the process, things accelerate, and all concepts and correlations overlap to about 90%, and the stories begin to be more interesting at this point. This is because of going deeper, the subjects loses awareness of being recorded, and the system of concepts expounded beforehand lets the subject’s inner world unfold with respect to the topic.

**Storyline parameters**

Storyline is not identical to storytelling, although they are built on one another, and are related methods. Storytelling supports communication though the power of the stories, while the storyline is the framework itself, the path leading to storytelling.

Storytelling is as old as the history of mankind. Listening to stories stimulates the functioning of the right cerebral hemisphere, which is responsible for creativity, sensing and even for one’s sense of humour. We can understand other people’s emotions through stories. We connect to one another through stories: we tell what happened to us, we gossip, we tell stories and quote anecdotes. Our brain senses imaginary experiences and emotions in the same way as real events: be it a good book, theatre piece, film or a moving conversation with friends; if the story is good, we identify with the personae. Of late, new procedures appeared in the field
of futurology that are on the one hand based on creativity, and on group thinking on the other.

The storytelling method grew popular because the problems of the present and the future cannot be solved within the confines of the conventional system of values. Bringing new values to the surface may be greatly aided by the so-called storytellers, who, through their own subjective perception, may draft new events of the future. The mindset of storytellers is heavily oriented towards a global awareness and openness, while their stories and visions of the future also express the versatility and diversity of the world.

The storyline method was first developed at Jordanhill College in Scotland in the mid-60, which is today part of Strathclyde University. The objective of the creators of the method (Steve Bell, Sallie Harkness and Fred Rendeli) was to develop an integrated approach of curricula that may be subdivided parts A characteristic of the method is that it focuses on a story. This story or tale is wound around key questions. Key questions raise a problem each, which the students must solve, which carries the story forward. That’s how students become part of the story. So, in order to progress, active contribution is required, making even the unmotivated students motivated. A great advantage of this method is that it is not only linked to a particular subject, but more than one subjects may be concentrated into one topic. Child-orientedness was put in the focus, and their primary objective was to create appropriate classroom conditions for the students, promoting the acquisition of skills that are indispensable for learning. In the course of applying the method, students acquaint themselves with strategies that are equally applicable to class, group or individual works. The parts and episodes in the method are built on one another, ensuring progress and flexibility and as the story progresses, the
part of curricula to learn also unfolds. The participating students are urged to find the answers themselves, so they are made to face problematic situations, which they must solve with the help of their own knowledge and various sources of information. In Hungary, it was the Institute of Educational Research and Development (Oktatáskutató és Fejlesztő Intézet, OFI) that compiled a guide in Hungarian language, introducing the application of the storyline method to pedagogists. The Storyline method became accredited training in Hungary in 2015.

In the research I conducted, achieving a similar openness in the subjects, we explored the present and future dimensions of waste management through the REP system of concepts. Therefore, this research method is capable of exploring deeper correlation in combination with the REP test than a depth interview would alone, as the subject uses his/her won system of concepts to dig deep into the topic, analysing, evaluating or expounding them. And in the research part of the Storyline method, the person conducting the research can urge the respondent to seek deeper connections. The integration of these two methods made it possible to obtain a comprehensive picture of the current waste management scenario’s evolution in Hungary.

**Subjects of the research**

I selected fifteen professional leaders, currently holding high and relevant positions in the state and local governmental sector, and also from the non-profit and the civic sector. Supplementing it with a testing nature – to ensure whether they exercise influence over the result of the research – I had the test filled by two additional persons. A consumer who identifies him/herself as waste conscious, is well-read in the topic, and myself, too. Eventually, as the answers given by us would not have altered the result of
the research in any way, I left my concepts in the core material of the research.

I. The scientific results of the dissertation
The research has revealed what can be communicated in terms of societal mind framing, what the elite of the profession thinks, what the public can be told and what misconceptions are present. How far can consciousness go in the present situation. Research has shown tension between the profession and the public sector, the main reason being the lack of communication and the different perception of the priorities of waste-related matters. Based on the reports by the professionals, it became evident that the problems of combustion and composting stand out by far. That every subject revealed a similar system of concepts and problem curve during the conversations, confirmed the appropriate selection of the subjects. The phenomenon of interests vs stakeholders also became a recurring element, according to which only those topic in the waste management profession are embraced where there are underlying interests present or there is money behind them: this is why there is no mobile composting, for instance, because there is no company that would manage it.

The REP test created 255 concepts related or associated with waste, based on which 31.5 hours of audio material and 65 pages of storyline supplementation were also created. From these, I filtered out three concepts referenced with outstandingly higher frequency: selective waste collection, utilisability of the material of the waste, utilisability for energy purposes, i.e. waste incineration, as it is more commonly known. As the first three had been mentioned more frequently than the others – and compiling their roles with the Storyline material – I think my research
materials pointed out the most important or most problematic topics with the help of this method of highlighting.

The most outstanding result of the research is that based on the answers given by the research subjects, the Hungarian waste pyramid is different in comparison to those of our Western European neighbours and those of the Hungarian Waste Framework Directive as well. Recycling, i.e. selective waste collection is of a higher priority than the utilisation of the waste material. Although utilisation for energy purposes was only the third most frequently mentioned REP concept, it can be clearly demonstrated from the Storyline part that professionals opine the current decision makers should place far greater emphasis on waste incineration. Further investments in this direction and the development of the already existing facilities/systems may be the way for Hungary to emerge and establish sustainable environment-conscious development.

The thought that health-consciousness is related to waste – these being built on one another and closely correlated in fact – was born as a comprehensive result of the research. It is not possible for an individual to be waste-conscious without checking the quality of the goods purchased, the effect it may have on human health, or what the product has been packaged into. It is interesting to examine the environment-conscious developmental curve that evolves in a consumer. First, messages find and convince the consumer on consciousness related to energy consumption, as individual involvement and interest is generated by demonstrably saving money through dedicated attention to the matter. Furthermore, if the principles of these (not only financial return) are incorporated in the individual’s everyday life, the individual may become susceptible to activities such as selective waste collection or individually tailored healthy
lifestyle programmes. These are interrelated, supplementing and one another, shaping the individual behaving responsibly vis-à-vis the environment. Therefore, the various topics of environmental protection should in no way be separated and they should be communicated separately to the public.

This is how the situation we observe nowadays develops: people think there is an order of priority among the various topics. Unfortunately, the organisations of the various environmental protection areas, using different systems of concepts, bombard the public with different messages on what to do in order to behave responsibly for the environment.

Holistic thinking is unfortunately not characteristic of the environment protection trade, in spite of the fact that this would result in the better management of the respective topics of the operators, and that a systematic approach would have a far greater effect on consumers. In their own lives, they are able to easily and relevantly incorporate the means of protecting the environment and preventing damage. Adults conveniently push the responsibility on their children by quoting “the next generation will solve it”. This is the attitude that calls for change. There is however, no efficient platform available to them as the kindergarten or school for children, where such environment-conscious activities are incorporated in their everyday lives as fundamental schemes. Adults, on the other hand, if involved as part of an internal communication activity in a green office programme and is “obligated” following internal information to exercise daily attention to it, they demonstrate assertive resistance, cooperation (even feigned cooperation) being out of the question. Employees who live a priori environment-consciously, such initiatives work perfectly, and they are the ones who quite probably switched off their computers when they
left the office for more than half an hour even before the corresponding notification was issued. Looking at the communication of for profit companies, they are likewise segmented, embracing specific topics only. They have appropriations and objectives, and they will make the specific environmental protection matter connected to their area serve these objectives.

In their communication, they will segment the target group, those concerned and the corresponding messages and set of instruments as per their own interests. To set up a strategy in which everyone is in the target group is impossible on the one hand (or is a question of money), and inefficient on the other.

At the same time, the emphasis is not on selecting the target group, but to support the consumers with this holistic environmental thinking, within which it is possible to highlight our topic of preference. It should be the obligation of everyone to back this up with a system, one that would help understanding as well as better reception of the matter. If substantive CSR (corporate social responsibility) were going on in Hungary today, all profit oriented enterprises targeting a larger public would incorporate efforts related to sustainable development and environmental projects in their strategies. Of course, nothing is easy when one is to go it alone, hence the non-profit and civic organisations who already have experience in this holistic environmental way of thinking and await companies with open arms to join their efforts in this direction. Governmental policies are not helping the situation at present.
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