

Negative Perception of Waste: An Obstacle to the Sustainable Salubrity of Kinshasa, the Capital City of D.R. Congo

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ABSTRACT:

In the present world, some wastes are considered as second-level matters and dumps as a deposit for economy. This positive perception motivates the perspectives of large scale valorization for waste in Kinshasa where insalubrity is more increased. But, for Kinshasa people, what is a waste? Are they prepared to make a choice of their dust? These two questions pushed us to presume that Kinshasa people have a negative perception of waste and that this one is an obstacle to sustainable salubrity of their town. This piece of research shows results got from a sample of 385 housekeepers and proposes some answers.

KEY-WORDS: *Waste, Perception (positive or negative), Valorization, Environment education.*

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I. INTRODUCTION

A sample of Kinshasa's population were interviewed in order to know their perception of waste and their availability for sorting their waste, considering that waste recovery is part of Kinshasa's sustainable sanitation initiatives, essential action for the recovery of waste.

Our aim is to know the behaviors and aspirations of Kinshasa people, considered as producers of waste, in order to contribute to the search for solutions to increase their sensitivity and participation in the sustainable health of their city.

It has often been thought that the key to all social problems is in economics and / or politics. But it turns out that both domains are dependent on cultural values and social behaviors, and that these are determined by the perception that one has of facts or things, that is to say the way of to receive them by the mind, to understand them by the senses, by consciousness, or by reason. This is the case of waste whose volume, diversity, recycling (management) and effects on the environment and health are debated in the modern world.

The facts mentioned in the preceding paragraph have already been elucidated by several scientists, including: Mashini et al (1992), Leroy (1997) and Esrey (1998). In 1999, there were Diatezua, Kasulu, Kiyombo et al, Kondani, Lapika and Matula (1999). We can also mention Chabot (2001), Zentner (2001), Regent (2004), Binzangi and Kinvuedi (2004), LeloNzuzi (2008), Fleury-Bahi (2010), Damien (2013), Binzangi and Falanka (2014), Weya et al (2014), Munkuamo (2016) and Holenu (2016).

In relation to the perception of waste, we can note that Matula (1999) hypothesized that the insalubrity that characterizes the city of Kinshasa can be understood from the analysis of the original cultures of Kinshasa people. This hypothesis corroborates the vision of F. Zentner (2001) when he states: "show me what you throw, I will tell you who you are". It can be deduced from this that the impact of people on their environment can be evaluated in terms of their behavior. Hence, the importance of thinking about the possibilities of adaptation and behavior change for the preservation of the environment. According to Fleury-Bahi (2010), waste sorting is one of the behaviors to be developed on a daily basis because they are favorable to the environment. On the other hand, the divergent interpretation of the notion of waste by producers and managers of the environment is one of

the causes of insalubrity (Lapika, 1999). Thus, there appears the necessity of the mesological education of all for the improvement of public health.

II. ENVIRONMENT AND METHODS

In 2016-2017, in these quarters “Anciens Combattants” (Kasa-Vubu township), Kasai (Barumbu township), Madrandele (Lemba township), Residential (Limet township) and Ngomba (Kisensotownship) targeted in the five strata of the urban morphology of Kinshasa, a survey by written questionnaire was carried out in order to know the Kinshasa people's perception of the waste. The investigation focused on three main issues :

- What do you think is a waste?
- How do you perceive their presence in your neighborhood, even in the city of Kinshasa ?
- What can be done for you to have a positive perception of waste, in order to increase your participation in the sustainable sanitation of your neighborhood and your city ?

A total of 385 heads of household, split into group of sex, age and level of education, were interviewed. This number was calculated in proportion of 1/10 of the total residential parcels occupied in each targeted neighborhood.

After interviewing household heads, the surveyors visited the selected plots and others to observe and gather useful additional information.

III. RESULTS AND DISCUSSION

The results presented and analyzed relate to the following aspects : the characteristics of the sample, the perception of waste and the predisposition of the subjects surveyed to waste sorting.

3.1. Characteristics of the sample: sex, age, marital status and educational level

Table 1 shows that the survey involved 85.4% men and 14.5% women heads of households. This composition reflects the African social organization in general and Congolese in particular, which grants the man the status of head of household. In the city, and in the single-parent household, the woman becomes of it only in the event of widowhood or celibacy. Moreover, the survey revealed briefly that heads of households living in heterogeneous couples represent 75% of all; widowers and singles 17%; monogamous 8%.

Table 1: Distribution of surveyed subjects by sex and age

Age \ Sex	20 – 39	40 – 59	60 and more	Total (sex)	%	Undetermined Age
M	43	165	126	334	86,7	7
F	12	22	17	51	13,2	20
T	55	187	143	385	////	///
%	14,2	48,5	37,1	////	100	///

With the exception of people whose age has not been declared or given imprecisely, Table 1 shows that 14.2% of heads of household are between 20 and 39 years old; 48.5% are between 40 and 59 years old; those aged 60 or older represent 37.1% of the sample. The predominance of heads of households over forty (85%) indicates that the neighborhoods studied are not recent.

According to the results of Table 2 on the level of education, 11.9% of heads of households surveyed have completed primary or incomplete education, 53.2% have been in secondary school and 33% at the higher or university level. Overall, it can be seen that 64.3% of heads of household have completed the course of study started. From these results, one can consider a priori that basic notions of hygiene in general and the environment in particular are supposed to be known and internalized. Therefore, the vast majority of subjects surveyed should have a positive perception of waste as the first condition for sustainable sanitation.

Table 2: Education level of the subjects surveyed

Education level of surveyed subjects (complete or incomplete cycle)	Number	%
Primary	46	11,9
Incomplet	12	3,1
Complet	34	8,8
Secondary	205	53,2
Incomplet	22	5,7
Complet	183	47,5
Higher or university level	126	32,7
Incomplete	95	24,6
Complete	31	8,0
Undetermined	8	2,0
TOTAL	385	100

3.2. Waste perception

Regarding opinions on the perception of waste, Table 3 shows that 75% of heads of household consider waste (all categories combined) as unnecessary objects, resulting from human activities, abandoned or destined for abandonment. Meanwhile, many of them recognize that waste causes disease. These would be people who lack education, training and information, especially in the field of rudology. However, for 21% of household heads, waste can be sorted, recovered, reused, recycled and even bring in money. In this way, waste is a secondary resource that must be managed in order to avoid the risk of nuisance, pollution and disease. This perception implies a socio-cultural or study level high enough to internalize the basics of public hygiene, or even the quality of living environment as recommended by "Habitat II". The subjects who gave ambiguous opinions or who remained indifferent to the presence of waste constitute 3.6% of answers obtained.

It is the group of people insensitive to the reality of waste, an attitude that cannot be recommended; because, the rational management of waste is everyone matter

Table 3: Distribution of the subjects surveyed according to the perception of the waste.

Perception the waste	Number	%
Useless objects(source of diseases)	288	74,8
Secondary ressource	83	21,5
Ambiguousanswers or nonsense	14	3,6
Total	385	100

As it can be seen from the results in Table 3, overall, it appears that the commercial or utilitarian value of waste, as it is currently perceived in the world, is unknown by the majority of subjects surveyed. This state of matters can be explained in particular by arguments explained previously. Considered as the first condition for action, the negative perception of waste is one of the factors that explain the behaviors that generate unhealthy conditions in Kinshasa and even in all the urban centers of the Democratic Republic of Congo. Binzangi and Kivuendi (2014), Binzangi and Falanka (2014) and Munkuamo (2016) agree on it. This observation leads us to the examination of the opinions obtained on the predisposition to accept the selective sorting of waste, the learning of this practice and their eco-logico-economic and social management.

3.3. Predisposition of the subjects surveyed to waste sorting

Sorting or selective collection of waste consists in separating the waste according to its nature, choosing the elements recoverable, reusable, re-employable or recyclable out of the evacuation circuits, in order to reintroduce them into a new production circuit. goods. Sorting at the source of waste production is the most effective solution to promote recovery channels but also public health. In addition, it has the advantage of reducing the amount of waste, their alterative effects. This way of doing things contributes to improving the environment and the population health.

The results on the predisposition of the heads of household surveyed to practice the selective sorting of their waste appear through the answers obtained, first on the number of bins that a household can have for the storage of its waste, then on the aspiration to learn this practice.

3.3.1. Compared to the number of acceptable bins

Excluding useless responses, opinions received are split into groups as follows:

- 80.2% of surveyed subjects (309 out of 385) prefer to have only one bin. This response is somewhat surprising, as most households use two or three old containers for storing their waste. In fact, the preference of a single trash can be interpreted either as the expression of the fear of paying the sanitation tax to the number of trash cans, or as a camouflaged rejection of the ecological sorting of waste, considered as a work too much and messy. This reality has already been mentioned by several researchers including MatadiPasa (2014) and Munkuamo G. (2016).
- 14.5% of them (56 out of 385) are willing to sort their waste, but with only 2 garbage cans. This positive attitude is sustainable because it would, initially, initiate households to reserve a bin for organic materials and another for plastic waste. Further sorting, especially for other types of waste, can be carried out at the level of public landfills meeting the technical and scientific requirements, managed by a "specialized" workforce.

3.3.1. Compared to the number of acceptable bins

Excluding null responses, comments received are broken down as follows:

- 80.2% of surveyed subjects (309 out of 385) prefer to have only one bin. This response is somewhat surprising, as most of them use their containers for storing their waste. In fact, the preference of a single trash can be interpreted as the expression of the fear of paying the price of trash cans, or a camouflaged rejection of the ecological sorting of waste. messy. MatadiPasa (2014) and Munkuamo G (2016).

• 14.5% of them (56 out of 385) are willing to leave their waste, but with only 2 garbage cans. This positive attitude is sustainable because it would initially, initially, have a negative impact on the environment. Further sorting, especially for other types of waste, can be carried out at the level of the public and by a specialized technical person.

76.1% (293 out of 385) refused this practice and even their apprenticeship. In this group, 51.1% of subjects surveyed justified their position by lack of time; 28.3% expressed an absolute refusal, without giving reasons for their opinion; 20.4% felt that the sorting of waste would be extra work and difficult. In addition to the aspects mentioned earlier in the same work, the reasons given by these subjects constitute, for us, only alibis. Hence the need to invest in the training of these people, for the sake of the success of sustainable sanitation in Kinshasa.

• 3.3% (13 out of 385) of the subjects surveyed abstained or gave ambiguous answers. The attitude of these subjects has already been elucidated in the preceding parts. Nevertheless, they need regulatory information, stigmatized in particular by Munkuamo (2016) and Binzangi (2018).

Finally, considering the proportions of encouraging responses, namely: 21.5 for the positive perception of the waste, 14.5% for the use of at least two bins and 20% of favorable opinions to the learning of the waste. Selective sorting, we realize that barely 1/5 of household heads surveyed would change their attitudes and behavior in favor of ecological, economic and social management or integrated waste management.

IV. CONCLUSION

The sustainable health of the urban environment through the recovery of solid waste is largely dependent on psychological, political, economic, technical and ecological factors. This is why educational, legislative, financial and material solutions are needed. It is therefore up to the public authorities and civil society to establish significant action programs : environmental education, in this case geared to informing, sensitizing and empowering the population on the health consequences of safety or health. insalubrity; development of updated and applied laws related to integrated waste management; granting to the population facilities for the acquisition of ecological bins in each parcel and regularly evacuated; support for waste pickers and recyclers; creation of urban waste recovery agencies; support for scientific research, particularly in the field of rudology.

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