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Inhabitants of Coastal Municipalities Facing Coastal Risks: Understanding the Desire to Stay

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ABSTRACT

This study focuses on the representation of coastal risks (marine erosion and submersion), in a highly topical context relating to global environmental changes, and more specifically on the consequences of the increasing attraction of coastal areas. Through a psycho-socio-environmental approach, we sought to identify how inhabitants of coastal municipalities in a so-called "at risk" area represent the coastal risk of their surroundings. A survey by questionnaire was carried out to compare inhabitants of the risk zone defined in the Risk Prevention Plan – RPP [*Plan de Prévention des Risques*] with those living outside this zone. The main results reveal that inhabitants are very attached to their living environment, which appears to them to have more advantages than constraints. When asked to describe risks to their town, inhabitants mention coastal risk the most often. A social representation of coastal risks then appears, objectified through marine submersion. This makes it possible to understand the ambivalence of a discourse in which the sea is both a danger and a source of pleasure. These results are discussed in the light of cognitive polyphasia.

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Many coastal issues have recently arisen in relation to global environmental changes (e.g., sea level rise) and the constantly growing appeal of coastal areas (e.g., increased housing construction). The combination of these natural and social dynamics weakens the coastline, making it vulnerable to marine-related hazards and, thereby, turning it into an "at risk" area for its residents. In France, concerns about this type of natural risk have increased since 2010, the year when the Xynthia storm struck the Vendée and Charente coasts, at the cost of many human lives. This storm left its mark and represents a turning point in the management of areas exposed to risks of submersion and erosion (Krien & Michel-Guillou, 2014). Faced with these risks, which are not new, but received recent attention, the State responded, supported by a part of the scientific community, recommending that important stakes and activities were relocated (MEDDE, 2012),. This strategy is far from being unanimously approved, especially at the local level (Michel-Guillou & Meur-Ferec, 2016a). To understand this discrepancy in points of view, it is important not to focus on the discrepancy itself – often explained in terms of lack of information, errors or cognitive biases (Michel-Guillou & Meur-Ferec, 2016b) – but to focus on the psychosocial processes and functions that underlie it (Batel & Devine-Wright, 2014); this is the interest of making a study on social representations.

In this context, an interdisciplinary research project was carried out with the broad objectives of understanding systemic vulnerability in the face of coastal risks (Hénaff, 2014). The present study aims to understand the vulnerability to risks of erosion or submersion and to move towards sustainable management strategies for these risks. We chose to take a psycho-socio-environmental approach in this work (Navarro-Carrascal & Michel-Guillou, 2014), which aims to study the representations of risks of individuals concerned or likely to be concerned (local stakeholders, residents, people with maritime professions, etc.), in relation to hazards, stakes and management strategies. Specifically, we seek to understand how inhabitants living in areas at risk represent coastal risk (erosion and/or flooding). Risks, treated as a social construction, refer to different forms of knowledge according to the type of people involved (managers, inhabitants, etc.), according to their attitudes and behaviours towards the hazards (erosion or flooding) or the processes that cause them (sea, storms, etc.) and according to their relationships to the territory or the environment in general. Our earlier investigations showed that socio-demographic indicators are not appropriate for understanding the vulnerability of populations at risk (Michel-Guillou & Meur-Ferec, 2016a). Other indicators related to the social, cultural or spatial context play a role in

the construction of this knowledge (Michel-Guillou, Lalanne & Krien, 2015). This local knowledge, based on common sense, is a key to understanding and explaining attitudes, practices or choices in adaptation strategy (risk management preferences, choice of place of residence). It can change over time, following significant, often irreversible, events like storm Xanthia, or with new knowledge or perspectives (e.g., new protection laws). This knowledge can lead to social representations, built by individuals who are concerned, exposed or likely to be, in order to act and communicate. It is these representations that we want to identify. The present study is a continuation of research carried out on the representation of coastal risks by inhabitants of coastal towns (Michel-Guillou et al, 2015; Michel-Guillou & Meur-Ferec, 2016a). It focuses on living place and the relevance of whether this is inside or outside the risk area.

WHAT IS COASTAL RISK?

Coasts are subject to many dangers including those related to coastline mobility (changes in beaches, cliff retreat, etc.) and sea level rise. Furthermore, the attraction of the coast generates a steady increase in the building of infrastructure (roads, houses, etc.). With the aim of reducing coastline mobility, or even halting its evolution, arrangements to protect inhabitants from coastal risks have multiplied (ripraps, seawalls, etc.). However, the validity of such strategies, which are costly in terms of construction, reconstruction and maintenance, are now being questioned, particularly as their effectiveness against coastal hazards is controversial. Our study therefore focuses exclusively on the risks of marine erosion (cliff erosion, loss of beach sand) and submersion. Submersion is understood as a temporary flooding caused by a rise in sea level (Georges & Orchard, 2006).

Coastal risks are classed as “natural” risks (D’Ercole & Pigeon, 1999). The term “natural” is usually used to describe risks associated with hazards considered to be of natural origin (earthquakes, flooding, etc.), although some hazards have an indisputably anthropogenic component. Nevertheless, it still seems difficult to assign total and direct responsibility for these hazards to human action. So these so-called “natural” risks have some characteristics that distinguish them from others (Michel-Guillou & Meur-Ferec, 2016b; Navarro-Carrascal & Michel-Guillou 2014). Compared to industrial risks, natural risks are not as tangible or noticeable in the landscape as a factory, for instance. Additionally, since it is not always easy to locate them

precisely in space or to predict the probability of their occurrence, it is sometimes difficult to propose consensual adaptation strategies to deal with them. These strategies are based on identifying "vulnerable" territories, an approach to risk that has been extensively developed, particularly in geography (November, 2002). Finally, coastal risks tend, in contrast to industrial risks, not to be located in stigmatized areas (Poumadère & Bertoldo, 2012; Slovic, 2000), but are instead located in highly socially valued areas (Corbin, 1988). The relationship with place is therefore an important aspect to take into account.

FROM "AT-RISK" TERRITORY TO PLACE ATTACHMENT

In psychology, many studies have focused on place-related concepts to understand people-environment relationships. The concept of *sense of place* (Hay, 1998; Stedman, 2002) allows us to understand the sense that an individual gives to their living place in general. This concept includes an affective dimension, *place attachment* (Hidalgo & Hernandez, 2001).

Considering risks in this context, several studies have shown a link between place attachment and representation of risk. For example, Billig (2006) studied this link in relation to war. The stronger the place attachment, the lower the perception of risk, which consequently leads to a heightened sense of security. Individuals are aware that they live in an exposed area but they do not feel unsafe. This representation of their environment enables them to cope with the risk situation. Similar results were also found in studies on river flooding (Bonaiuto et al., 2011; Weiss, Colbeau-Justin & Marchand, 2006). When people displayed high levels of attachment to their living place, they accepted risk as part of the environment. The authors highlighted that people who are very attached to their home and who have lived there for many years are also informed about and involved in the management of their living place. Such a representation of risk allows people who are strongly attached to their environment to maintain a feeling of control over events (Weiss, Girandola & Colbeau-Justin, 2011) by minimizing change. When people feel they can control risk, they can avoid relocation or the stigmatization of their living place – two elements that can produce a sense of loss and have a negative impact on place identity (Wester-Herber, 2004). So, when a danger appears and threatens the collective identity, a social construction process takes place to deal with this danger. This "symbolic" coping implies appropriation of the object of the risk, and familiarization with the unfamiliar in order to make it intelligible and

communicable (Kronberger & Wagner, 2001), which may lead to the construction of a social representation of a given risk.

SOCIAL REPRESENTATIONS OF RISK

In the field of psychology, there is a general consensus (e.g., Batel & Devine-Wright, 2015; Joffe, 2003; Slovic, 2000) that there are discrepancies between expert risk assessment systems and the representation systems of lay people (e.g., inhabitants and users). This gap in the assessment of risk leads to difficulties in its management. Better knowledge of representations could contribute to reducing these issues. Several studies have been made on social representations of risks (Breakwell, 2001; Joffe, 2003; Poumadère & Bertoldo, 2012) that highlight the cognitive and functional characteristics associated with this construction.

Social representations consist of social knowledge: a shared knowledge of common sense (Moscovici, 1976, 2013). This social thought, rooted in a culture and linked to practices, enables individuals to understand their environment, to communicate and to act toward it. This thought is a "reality" that gives meaning to what seems strange or unusual. In doing so, the representations contribute to the sharing of ideas, values and beliefs; they thus allow communication through a common universe, and evolve through dialogue. Moscovici (1976) was interested in how a scientific concept becomes an object of common sense, and demonstrated two processes at work in the genesis and development of a social representation: objectifying and anchoring. The goal of *objectifying* is to materialize abstract concepts through images, so that they can be communicated throughout society. A scientific phenomenon that is difficult to perceive is objectified, or symbolized, through concrete, current and familiar elements. *Anchoring* occurs by the rooting of the abstract scientific concept in familiar categories of thought or language, thus enabling it to be used in daily life and social exchanges because it is “translated” into a language shared by all, a language of common-sense (Doise, 2005).

This social thought has its own specific processes (Moscovici, 1976, 2013). Among these, *cognitive polyphasia* refers to the idea that, within the same individual or a group, different systems of thought that have different functions and meet different needs can coexist (Jovchelovitch, 2008). This aspect is particularly important for understanding the construction and development of a representation of an object that is a source of debate or particular issues, in other words one that is

discussed. *Cognitive polyphasia* allows one to understand different styles of thinking and meanings, which depending on the relationships between the parties and the dialogues between those interacting. Representations can coexist within the same group or the same individual. These different meanings and representations are used differently according to the aims of the communication, its context or the standards that apply (Moscovici, 2013).

OBJECTIVES

This study focuses on the inhabitants of coastal municipalities. It distinguishes the inhabitants who live in a so-called "at risk" area, in terms of the Risk Prevention Plan – RPP [*Plan de Prévention des Risques*][1] for marine submersion, from those who live outside of these areas. In relation to the literature on these "natural" risks and their territorialisation, we will first study the attachment of inhabitants to their living place, insofar as this link to the territory participates in the construction of their social and personal identity. Secondly, we will try to grasp how risks in general are envisaged in these coastal municipalities. We looked at the representations that people had of risks in general to identify the part of the concern generated by coastal risks. In the definition of coastal risks, the sea is a major element, generating the hazards of erosion and submersion. It was therefore important to gain an idea of the inhabitants' image of the sea depending on their place of residence (within or outside the risk area). These results will provide us with elements to help us understand the social representation of coastal risks.

METHODOLOGY

Survey

In 2012–2013, a questionnaire survey was carried out on a large sample of people living in coastal towns in Brittany (France) exposed to coastal risks. Following the preliminary results, in 2014, a second quantitative study was conducted on four of these municipalities (Le Tour-du-Parc, Ile-Tudy, Ile-de-Sein, and Guissény)[2]. This second survey mainly targeted inhabitants living in areas

[1] http://www.developpement-durable.gouv.fr/Les-risques-littoraux.html
[2] For the details of these municipalities, see Michel-Guillou and Meur-Ferec (2016a) or Michel-Guillou et al. (2015).

defined as "at-risk" in the Risk Prevention Plan (PPR). The results presented here are from this second study.

Sample population

Questionnaires (n=590) were distributed directly to the residents' mailboxes (one per household) and 124 were returned (21% response). Among the interviewees (Table 1), our sample population comprised 36% females and 56% males, most of who lived as couples (73%). The mean age was 60 years. The majority of respondents were retirees (52%). For level of education, the most highly represented group were those educated to university level. Finally, 45% of participants were members of an association (sporting, ecological, cultural groups…).

Table 1. Main socio-demographic characteristics of respondents (numbers)

	Guissény	Île-de-Sein	Île-Tudy	Le Tour-du-Parc	Total
Gender					
Female	8	9	14	14	45
Male	9	9	32	20	70
Unknown	5	0	2	2	9
Age (years)					
Minimum	25	37	24	30	24
Maximum	75	87	84	89	89
Mean	55	61	60	61	60
Activity					
Working	9	10	17	16	52
Retired	9	8	29	19	65
Unknown	4	0	2	1	7
Qualifications					
None	2	4	3	2	11
Secondary	6	7	10	8	31
University	10	7	33	22	72
Unknown	4	0	2	4	10
Living place					
Principal	18	15	27	26	86

Secondary	4	3	21	10	38
RPP zone					
Within at-risk zone	13	10	39	8	70
Outside at-risk zone	9	8	9	28	54

Concerning the living environment, all the interviewees lived in houses, 90% of whom owned the properties: of which 73% had bought their property and 12% had inherited them. Primary residences (69%) were the dominant type. Our sample was not intended to be socio-demographically representative of the populations of each town. It targeted the residents living in "at-risk" areas: 56% of inhabitants lived in zones exposed to coastal risks (within at-risk zones) and 44% lived outside these zones (outside at-risk zone).

Data Collection Tools and Operationalization of Variables

The questionnaire consisted of 21 questions, composed on the basis of our earlier investigation (Michel-Guillou & Meur-Ferec, 2016a). The first part of the questionnaire focused on residence, lifestyle, neighbourhood image, etc., the second focused on the representation of the sea (distance to the sea, activities...); the third focused on place attachment (to the town, the neighbourhood, the house); and the fourth focused on risks and coastal risks. The different parts of the survey consisted of closed questions, opinion scales and word association tasks. In the present study, we focus on place attachment, the risks and the image that the sea has in the municipality. These data were examined in relation to whether the living place was within or outside the "at-risk" zone.

Place attachment

Place attachment was studied via different indicators of feeling, rooting, sense of community, sense of belonging, etc. These indicators are: "*This is the ideal house to live in / I feel privileged to live here / I would feel very sad to leave my house / I feel at home in this house / I'm concerned by any decisions taken about this place / I feel safe in this house / I have good memories related to this place / I would feel very sad if members of the household were to leave*". Each indicator was evaluated on a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). We made the choice to keep the "house" as the level of spatial scale because it is the main stake

in the systemic vulnerability approach (Hénaff, 2014). Two open-ended questions were then used to measure the advantages and disadvantages associated with the living place.

Identification of risks

Representations of risk enabled us to examine how respondents perceived risk in general and coastal risk in particular in their municipality. To study this representation, we used different indicators. The first indicator was a word association task that measured risks in general: "a. *Give three words or expressions to define risks in your municipality*. b. *Among these risks, which worries you the most?*" Secondly, a scale was used to evaluate inhabitants' attitudes toward the risk they found the most worrying: "*The risk is real / The risk may appear in 10 years / There is little chance that I will really be confronted with this risk / The risk is not proven / The consequences for me or my entourage could be significant / This risk is being handled by the competent authorities / I can personally act to limit this risk / I'm worried by this risk / This risk concerns me or people of my entourage*". Each item was evaluated on a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree).

The image of the sea

To study the image people had of the sea, a word-association task was used: 'a. *Give three words or expressions that for you define the words* "*the sea in your town*". b. *For each of the words or expressions, please indicate if it is positive, neutral or negative*'. This is a classic method in the study of social representations.

Data analysis procedure

The study was based both on qualitative (word association tasks, open-ended questions) and quantitative (closed-ended questions and opinion scales) data analyses. Word associations were treated via a manual thematic, based on a content analysis grid using a double-coding rate (with about 80% agreement). This association task makes it possible to highlight shared knowledge about a social issue, which is constructed in the relationships of communication. The aim is therefore to identify the common language for these interrelations. The content of this common knowledge refers to the objectification process (Doise, Clemence & Lorenzi- Cioldi, 1992). The data collected (in relation to the image of the sea) were examined in relation to residential area

(within or outside at-risk zone) through a Factorial Analysis of Correspondence. This analysis method makes it possible to anchor the representations in social psychological realities (Doise et al., 1992); this will enable us to understand the anchoring process, or, in other words, the way in which the unfamiliar elements are integrated into the familiar categories.

Furthermore, attitude scales were treated by variance analysis. As our study population was not normally distributed (Kolmogorov-Smirnov & Lilliefors test), a non-parametric U Mann-Whitney test of two independent samples (within RPP zone vs outside RPP zone) was carried out.

RESULTS

Sense of Place

The first objective was to see whether there was a difference in place attachment depending on whether the residence was in the "at-risk" area or not (within RPP zone vs outside RPP zone). We took into account the eight indicators mentioned above. Among these indicators, only "*sense of security*" appears to discriminate people living in the at-risk area from those living outside it (Table 2).

Table 2. Place attachment according to living place, within or outside the Risk Prevention Plan (PPR) zone

	Within at-risk zone	Outside at-risk zone	U Mann-Whitney
This is the ideal house to live in	2.07	1.75	NS
I feel privileged to live here	1.68	1.47	NS
I would feel very sad to leave my house	1.90	1.66	NS
I feel at home in this house	1.47	1.31	NS
I'm concerned by any decisions taken about this place	1.50	1.44	NS
I feel safe in this house	2.07	1.49	U = 1285; Z = 2,70; p < .01
I have good memories related to this place	1.50	1.40	NS
I would feel very sad if members of the household were to leave	1.63	1.61	NS

Note: Means on a 5-point Likert scale, from 1=strongly agree to 5=strongly disagree, significant items and non-significant (NS).

Regardless of the status of residential area with regard to the flooding hazard, people are attached to their houses. People living within RPP zones only feel very slightly less safe than those living outside these areas. However, the sense of security remains significant.

Among the advantages attributed to place, living in a coastal area was the main advantage cited (30%), the second was tranquillity (29%), and the third was the environment in general (19%). In consequence, the living environment and surroundings represent the main advantage for these inhabitants. Social (family, friends, etc.) or professional reasons were largely secondary (cited respectively by only 6% of respondents). In terms of disadvantages, the distance from convenience stores was the most important (28%), followed by urban problems (proximity of a road, lack of maintenance of public roads, neighbourhood problems, etc.) and proximity to the sea (the two last disadvantages were cited by 16% of respondents). 25% of inhabitants did not evoke any inconvenience. Among these criteria, the choice of tranquillity as an advantage distinguished the inhabitants within the RPP zone from those outside it (Chi-square = 6.36, dl = 1, $p < .05$): the latter choose this argument more often than the former to qualify their living place. Regarding the disadvantages, the sea as a source of danger was highlighted more by the inhabitants within the RPP zone than those living outside it (Chi-square = 5.38, dl = 1, $p <. 05$). For these residents, the sea seems to be perceived as a threat. Therefore, how do they describe the risks in their municipality?

Identification of risks

Regarding the identification of "*risk in their living place*", 69% of respondents (n = 85) evoked an element referring to coastal risks (flooding, sea level rise, tidal waves, erosion, etc.) and 39% (n = 48) reported at least one element related to storms (storm, tornado, strong wind...). These elements are important mechanisms in the processes generating coastal hazards. Among the other risks defined in the living place, 17% (n = 21) reported burglary or theft and 15% reported personal concerns (risk of isolation, loneliness, loss of autonomy, etc.). Other risks were referred to less frequently (less than 10% of cases): risk of pollution, societal risks such as the aging population,

social risks associated with tourism, “the invasion” of these coastal municipalities in summer, etc. Coastal risks (flooding/erosion) are omnipresent in the minds of respondents.

Following the identification of risks, individuals indicated the one they considered the most worrying among these. Among the 69% respondents who identified an item referring to a coastal risk, 76% saw it as a concern (Figure 1).

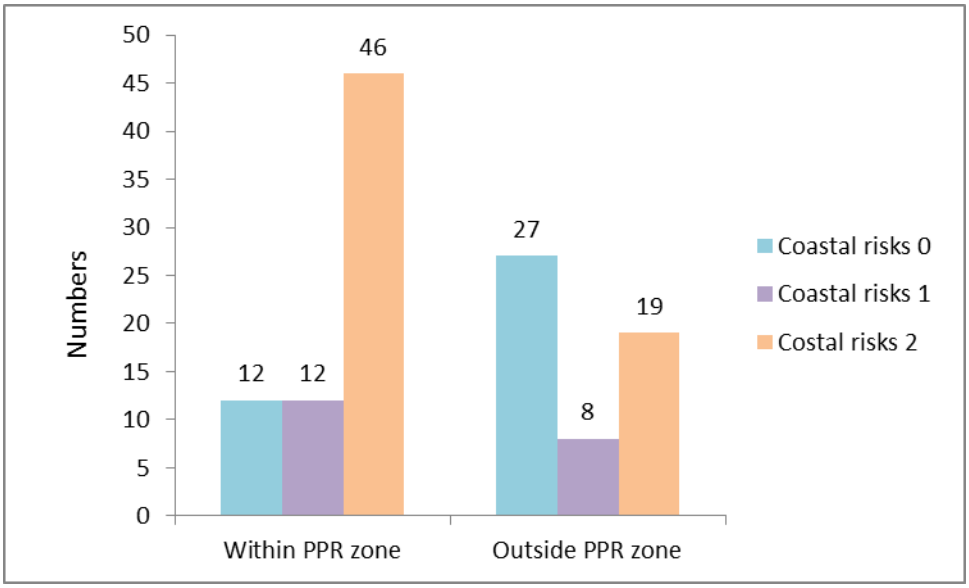

Figure 1. Concern about coastal risks according to living place, within or outside Risk Prevention Plan (PPR) zone.

Note: Coastal risks 0 = people never evoking coastal risks; Coastal risks 1 = people who cited at least one element related to coastal risks (flooding, flooding, erosion...) but not citing it as a concern; coastal risks 2 = coastal risks are cited as a concern.

Inhabitants living within the RPP zone are more worried about coastal risks (Chi-square = 15.99, dl = 2, $p < .0005$) than inhabitants living outside the RPP zone. Among those citing flooding as a serious risk, people living in the risk area consider, more than the others (outside RPP zone), that the risk is real ($U = 235$, $Z = 2.04$, $p < .05$) and that they risk to be confronted in their life ($U = 193.5$, $Z = 2.09$, $p < .05$); they say they are more worried about this risk than others ($U = 183.5$, $Z = 2.28$, $p < .05$) and feel more concerned for themselves or people of their entourage ($U = 199$, $Z = 2.19$, $p < .05$). However, if we compare the attitudes of respondents who chose the coastal risk as the most worrying concern to the attitude of interviewees who choose another risk as a concern, none of the dimensions described above reveal any significant differences. In other words, the coastal risk seems no more or less real than another type of risk; people who cite coastal risk as

the most important are not any more concerned about this risk than others are about their most important points of concern (pollution, isolation, aging, etc.).

In conclusion, the attitude to coastal risk does not seem different from the attitude taken in relation to other risks. However, among those who consider this risk as a concern, those who live in an "at risk" area seem more concerned than people living outside one. The sea is the main vector of this risk. We will now look at how these people represent it.

The Image of the Sea

Finally, we sought to identify the image of the sea, its connotations and its ambivalence, taking into account residence (or not) in the "at-risk" area and concern about risks. For all respondents (N = 124), the content analysis, based on the words induced by the expression "*the sea in your town*", shows that this item is mainly defined by the "beauty" of its "landscapes" and the practice of maritime activities ("fishing", "boating", "swimming", etc.). The image of the sea is very positive (M = 1.3)[3]. This is an idyllic image of "holidays", "recreation" and the "beach". This representation appears rooted in everyday life. The "tourism" cited linked to these coastal municipalities is highlighted (20% of quotation) and is viewed ambivalently (M=0.29). "Danger" and "flooding" are also present (18% of quotations). Based on the associations (cited by at least 5% of respondents), we conducted a Factorial Correspondence Analysis. This explanatory analysis, based on a contingency table, descriptively highlights the relations between different components of the representation of the sea in the municipality and the concerns about risk according to living place. Based on the risks identified in the living place and according to their "at-risk" area, respondents are divided into four statistical groups: those who live in the RPP zone and cite coastal risks (ZonePPR-Submersion; n = 58); those who live in the RPP zone and do not cite coastal risks (ZonePPR-Other; n = 12); those who do not live in the RPP zone and cite coastal risks (OutZonePPR-Submersion; n = 27); and those who do not live in the RPP zone and do not cite coastal risks (OutZonePPR-Other; n = 27). The analysis produced two factorial axes that represent 85.96% of the total variance (Figure 2). The axes are interpreted in terms of the contribution of the variables to the formation of the axes.

[3] M = Mean of valence (negative, neutral, positive), obtained from the evaluation of the associations, on a range of variation from -3 (very negative) to 3 (very positive).

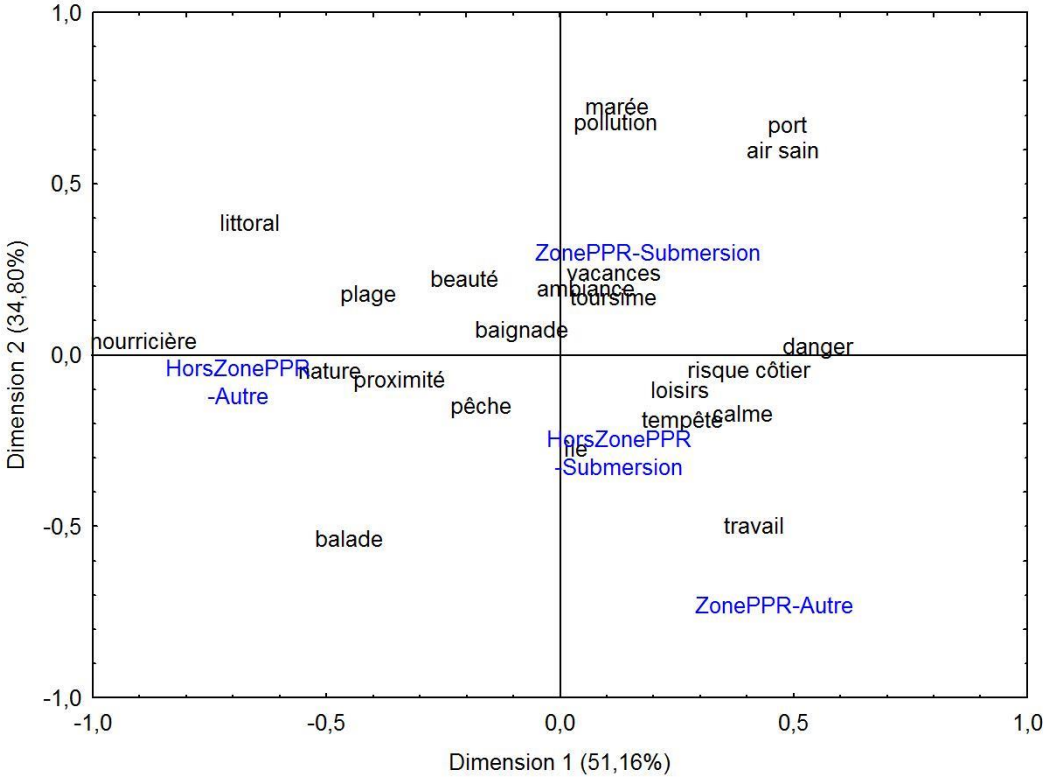

Figure 2. Social representation of the sea in the town, according to residential areas and concerns for coastal risks (AFC axes 1-2).

Axis 1, explaining 51.16% of the variance, opposes a "vernacular" vision (danger, coastal risk, hobbies, quiet, work) to a common vision of the sea (coastline, beach, source of food). The first refers to the ambivalence of the sea, as a source of pleasure (hobbies, quiet), danger (erosion, flooding) and work. This representation contains actual life experiences. In contrast, the "common" vision is more stereotyped. It refers to the coast, meaning the beach. Persons who have no relationship with coastal risks (either in terms of residential area or in terms of concern for risk) seem closer to this vision. In contrast, people who show a link with coastal risks appear to have a vision closer to the vernacular one.

Axis 2, which explains 34.80% of the variance, opposes a vision of someone for which the sea is part of their everyday experience (proximity to the sea, quiet, island/islander) with a view an occasional visitor might have of the sea (bathing, holidays, tourism, port, clean air). Inhabitants living in an "at-risk" area are shared between these two visions. Those who cite coastal risks are more on the side of an occasional vision, mainly centred on holidays. Conversely, those who live

in an “at-risk” area but do not cite coastal risks are rooted in a vision in which the sea is part of everyday life.

DISCUSSION AND CONCLUSION

This research aimed to help us understand how residents of coastal municipalities represent coastal risks. We did this by comparing the points of view of people living in areas considered “at-risk” according to the Risk Prevention Plan (PPR) for marine submersion (within RPP zone) with people living outside such “at-risk” areas (outside RPP zone). Specifically, we were interested in their attachment to their living place, their identification of risks in this living place, the relative importance they gave coastal risks in their identification of risks, and their image of the sea, because the sea is the main element they associated with coastal areas.

We demonstrated that the vast majority of the inhabitants of these coastal municipalities are very attached to their living place. The main advantages that characterize this living area are elements of the surroundings (tranquillity, proximity of the sea, etc.); and among these advantages, the proximity of the sea holds the most important position. Few of the elements studied related to place attachment distinguish people according to their living place (within vs outside the RPP zone). People living in the "at risk" area are no less attached to their homes. In agreement with the results of Billig’s research (2006), conducted in the context of war, all the respondents felt safe in their living place, but were aware of living in an exposed area. Thus, inhabitants do not "deviate" from experts’ risk assessment systems, they do not deny the risk; instead their way of thinking is social and "polyphasic" (Batel & Devine-Wright, 2015). The scientific concept of “coastal risk” is objectified, concretized or symbolized through submersion, flooding, sea level rise, etc. Information about these risks is widely known (COP21, vigilance alert by Meteo France “wave-submersion” etc.) and is integrated into the representation of their environment. When asked to talk about it, they mobilize this representation wisely, in response to the researcher’s demand. Consequently, in terms of risks to their living place, when the question is explicitly asked of respondents, coastal risk is clearly identified. This risk is cited both by people living in the coastal risk area and those who live outside it. Among the inhabitants who made reference to coastal risks, differences nevertheless emerged according to whether or not they lived in the RPP zone. People living within the RPP zone, close to the sea, appear more concerned than people living outside the

RPP zone; the danger of the sea is anchored in their daily lives. We, therefore examined the relationships of these respondents with the sea, which is the main vector of coastal risks. Interesting differences emerge from the analysis, which highlights either visions of life experiences or stereotypical visions. The vision of experience shows the sea as a part of everyday life, an ambivalent sea, simultaneously a source of danger, pleasure and professional activity. The stereotypical view shows the sea as associated with the beach, coastline and holidays. It is these particular representations of the sea that distinguish people living in the risk area. Finally, we are faced with a form of ambivalence of people who consider themselves strongly attached to their homes and who live in a risk area; they recognize the existence of coastal risk and some of them see it as a concern.

Considering coastal risks as a social representation can explain this ambivalence, particularly through cognitive polyphasia. In this study, residents living in the RPP zone are aware of living in an "at-risk" area; they represent the sea as a potential danger but are attached to their living place. Cognitive polyphasia, which allows the coexistence of different thinking with respect to a complex problem (Jovchelovitch, 2008; Moscovici, 1976, 2013), can explain this apparent paradox. Cognitive polyphasia can be explained according to communicative dynamics, depending on which persons interact. Among our respondents, the attachment to their homes is essential, even before they describe their environment in terms of risk. However, when the researcher clearly asked them to identify these risks, they showed themselves to be both concerned and informed. They chose a way of thinking and gave a response adapted to the researcher's question on the identification of risks. Consequently, the majority of respondents acknowledged the existence of risk. However, when they described their surroundings, people did not mention risk first, they mentioned the sea. Nevertheless, the sea and its dangers are elements with which they have chosen to live, without thinking in terms of risk. They do not consider the sea a threat; on the contrary, for them, it enhances the territory (Corbin, 1988).

Thus, for the respondents, the sea is present in their environment, is part of their surroundings and thereby enhances their identity. To do this, the risk posed by the sea must be managed, controlled and not be seen as a threat (Twigger & Uzzell-Ross, 1996). This territory reflects important characteristics involved in place identity (Breakwell, 1992), particularly the distinctiveness and continuity. Thus, by its maritime character, this place of residence is considered as a privileged place that allows inhabitants to distinguish themselves from those living in other

territories. It is also full of experiences and personal experiences related to the sea (walking, beach, swimming, etc.), which are mainly hedonic relations that will extend these positive experiences in the present and the future. According to Breakwell (1992), these principles guide identity processes, depending on what is desirable. They can change culturally or over time, the principles identified above are those it highlights currently in contemporary Western societies. Thus, insofar as the living place contributes to the construction of personal identity (Bonaiuto et al., 2002; Twigger-Ross & Uzzell, 1996; Wester-Herber, 2004), it cannot be seen as a potential danger or a source of anxiety. Leaving this living place therefore seems inconceivable, contrary to the recommendations of the French National Integrated Coastline Management Strategy (MEDDE, 2012).

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