# Governance & safety solutions in maritime industry: The case of "Costa Concordia cruise liner"

Marzia Ventura<sup>\*</sup>, Umberto La Torre<sup>\*\*</sup>, Rocco Reina<sup>\*\*\*</sup>

Summary: 1. Introduction – 2. Context of the research topic – 3. Coordination's mechanism in cruise shipping – 4. On-board organization: The hierarchical relationships – 5. Methodology - 6. The case of Costa Concordia – 7. Considerations - References.

#### Abstract

Human resources management (HRM) has increased its functionality and popularity in the transportation industry as a dynamic and complex environment. Specifically, the maritime industry presents special challenges in managing human resources. Despite the requirements of International Convention on Standards of Training, Certification and Watch Keeping for Seafarers [STCW] and despite all best efforts, accidents do still occur by damaging environment, loss of lives and property. Since the human-based errors and risks are the dominant factor in shipping accidents [Baker & McCafferty, 2005; Er & Celik, 2005; Rehman, A.U. & Timraz, H., 2018], people become a strategic key in the transportation industry. As a consequence, the relevant issues of human resources management such as planning, training of personnel, competences, crew performance monitoring and payment of wages can be recognized as critical levers. Under these conditions, the paper aims to analyze and understand the implementation of HRM within the cruise ship. Specifically, which coordination mechanisms are used in a critical event. This paper uses a case study regarding "Costa Concordia cruise liner".

Key words: People Management, Crew Management, Maritime Industry.

<sup>\*</sup> **Marzia Ventura**, Assegnista di Ricerca in Organizzazione Aziendale, Dipartimento di Scienze della Salute, Università Magna Graecia di Catanzaro, E-mail: marziaventura@unicz.it \*\* **Umberto La Torre**, Professore Ordinario di Diritto della Navigazione, Dipartimento di Giurisprudenza Economia e Sociologia, Università Magna Graecia di Catanzaro, E-mail: umbertolatorre@tiscali.it

<sup>\*\*\*</sup> **Rocco Reina**, Professore Ordinario di Organizzazione Aziendale, Dipartimento di Giurisprudenza Economia e Sociologia, Università Magna Graecia di Catanzaro, E-mail: rreina@unicz.it

Received on June 11<sup>th</sup>; accepted on December 9<sup>th</sup> DOI: 10.15167/1824-3576/IPEJM2019.3.1235

## Introduction

Maritime logistic plays an important role in the global trading scene with over 80% of global trade by volume and more than 70% of the trade value being handled by vessels and seaports worldwide. Today, the maritime and cruise industry is facing several challenges relating to workforce planning and training (Nguyen, Ghaderi, Caesar, & Cahoon, 2014). For many decades the maritime and cruise industries have been decreasing the crew size which has resulted in increasing level of stress, safety concerns and less job satisfaction to seafarers (Porathe, Prison, & Man, 2014). Today, the cruise industry has steadily developed to become one of the fastest growing segments of the travel industry worldwide with a steady increase from 500,000 annual visitors and reach 27.2 million passengers worldwide (Murphy, 2013; CLIA, 2016). The rapid expansion of cruise tourism and development of the industry such as dynamic and complex environment has increased the functionality of the human resources management (HRM). Specifically, the maritime industry presents special challenges in managing human resources.

Despite the requirements of International Convention on Standards of Training, Certification and Watch Keeping for Seafarers [STCW] and despite all best efforts, accidents do still occur by damaging environment, loss of lives and property. Since the human-based errors and risks are the dominant factor in shipping accidents [Baker & McCafferty, 2005; Er & Celik, 2005; Rehman, A.U. & Timraz, H., 2018], people become a strategic key in the transportation industry.

By definition, hazards hold the potential to cause disasters (Coppola, 2015). Global Facility for Disaster Reduction and Recovery (2017) defines a disaster as an extreme, often sudden, event that causes damage to critical infrastructure and requires assistance for recovery. The damage imposed by a disaster may lead to another disaster, thus creating cascading effects (Pescaroli & Alexander, 2015) that are of particular relevance.

As a consequence, the relevant issues of human resources management such as planning, training of personnel, competences, crew performance monitoring and payment of wages can be recognized as critical levers.

Under these conditions, the paper aims to analyze and understand with a blended approach the management of the human resources – specifically the crew - in the maritime sector.

This paper uses a case study regarding "Costa Concordia cruise liner". The case represents the breakdown of the "Chain of command" and the non-compliance with the Safety Rota [document of Grosseto Ordinary Court, pp.595 succ.]. In fact there are multiple causes of the shipping accident: a

diversified series of behaviors, even omission, scarce application of the chain of command, as well as the lack of communication between command and crew and the incorrect application of the Safety Rota (including a safety plan, in which the operations are clearly and precisely designated). The best viable solution is to train people behaviors towards safe practices, in order to ensure that human error is eliminated. Better understanding of the determinants of effective collaboration among industry professionals can enable tourism industries to better manage critical events (Pyke, Law, Jiang, & De Lacy, 2018).

## 1. Context of the research topic

Cruise industry is specific as it can be allocated as a sector to the tourism industry in which it is frequently denoted as a small sector of it (Gibson and Papathanassis, 2010, p. 405), but it can also be seen as a small sector of a larger shipping industry with its large number of sectors and sub-sectors, e.g. merchant marine, navy, ship building, cruise industry, and other sectors (Parsa, 2008, p. 8).

The 2017 sees the historical record of cruise passengers amounting to 25.8 million passengers, this growth shows sustained consumer interest in cruising and an industry where demand continues to outpace supply. In fact, demand for cruising has increased 20.5 percent in the last five years (Cruise Industry Overview Report, 2018).

Today, most cruise ships carry between 2,000 and 5,000 passengers together with on average from 700 to 2,000 crew members.

As the cruise ship industry enjoys continuous growth and penetration into new markets, good safety records must be maintained to achieve business objectives.

The International Convention on Standards of Training, Certification and Watch Keeping (STCW) is the first internationally agreed regulation of the International Maritime Organization that relates directly to human factorrelated issues.

The first version from 1978 came into force in 1984, and in 1995 it experienced a complete revision and update, that fully came into force in February 2002.

Further amendments to the convention were adopted with the so-called Manila Amendments of 2010, which came into effect on 1 January 2012 (IMO, 2015).

The demand for the seafaring human resource element, that includes nautical and technical personnel to run the cruise ship as well as hotel and entertainment personnel to serve the guests, has been growing steadily.

The maritime industry is facing several challenges relating to workforce planning, recruitment and training (Nguyen, Ghaderi, Caesar, and Cahoon, 2014).

## 2. Coordination mechanism in cruise ship

Assuming that effective management of crew members is key to the effective operation of cruise ships, the aim of the paper is to contribute and understand the human resource management (HRM) within cruise ship organization. Specifically, the focus will be on which coordination mechanisms are used in critical events. The critical events are characterized by low probability/high consequence events that threaten the most fundamental goals of an organization.

By the end of the 1990s the first cruise ship owner companies started to introduce a separate shipboard HR officer position on their cruise ships. This development occurred mainly to relieve certain shipboard positions from HR related operational tasks due to increasing responsibilities and demands within their core duties, persuading over the years more and more cruise ship owner companies to introduce enhanced HRM approaches in their cruise ships.

The organizations define the human resources their "most valuable asset" & "source of competitive advantage" and emphasize the importance that employees have for them (Guest, 1991; Wright et. al. 2001).

In this context - complex and dynamic - crew members find limited possibilities for social interaction with the outside world and the authority and hierarchy is clearly defined in a rather militaristic form; the crews often face rapidly evolving and ambiguous situations where correct solution is not always evident or possible. In his seminal work, Faulkner (2001, p. 136) argued that "a situation in which the root cause of an event is, to some extent, self-inflicted through such problems as inept management structures and practices or a failure to adapt to change" should be referred to as a crisis. This definition suggests that crises are usually prompted by internal or man-made actions, such as erroneous corporate decisions, whereas external, nature-caused, forces trigger disasters. Importantly, the concept of cascading effects links crises to disasters (Pescaroli & Alexander, 2015)since external impacts (disasters) may prompt negative internal effects (crises)in case of poor preparedness.

In this situation, the coordination has a very important role on the cruise ship.

The several investigations of maritime disastrous have found crew member mistakes (e.g. coordination). Nowadays, this is a main component of the ship management because the maritime and cruise ships, from all over the world, don't have national crews, but mixed ones, made by sailors and officers from different countries of the world. Every activity that is carried out within the cruise ship implies relationships among the subjects who are part of it.

Based on the nature of the activities carried out within the organization, we can distinguish the coordination mechanisms based on feedback and those based on standardization.

Mintzberg (1979), distinguished six coordination mechanisms: "A coordination mechanism is a subsystem of the social system that coordinates the activities of the persons or organizations within it. Wherever a relation subsists between two or more persons or organizations, their activities require coordination".

Mutual adjustment	coordination	Coordination of work is made	
	mechanisms based on	possible by a process of informal	
	feedback	communication among people	
		conducting interdependent work	
Direct supervision	coordination	Coordination is achieved by one	
-	mechanisms based on	individual taking responsibility	
	feedback	for the work of others	
	rooubuon	(Hierarchy)	
Standardization of	coordination	Coordination is made possible by	
work processes	mechanisms based on	specifying the work content in	
1	standardization.	rules or routines to be followed.	
Standardization of	coordination	Coordination is obtained by the	
output	mechanisms based on	communication and clarification	
	standardization	of expected results. The	
		individual actions required to	
		obtain a goal are not prescribed.	
Standardization of	coordination	Coordination is reached through	
skills and knowledge	mechanisms based on	specified and standardized	
0	standardization	training and education. People	
		are trained to know what to	
		expect of each other and	
		coordinate almost automatically	
Standardization of	coordination	Norms are standardized,	
norms	mechanisms based on	socialization is used to establish	
	standardization	common values and beliefs so	
		that people work toward	
		common expectations.	
L			

#### Table n. 1 The coordination mechanisms

Source: Mintzberg, 1979

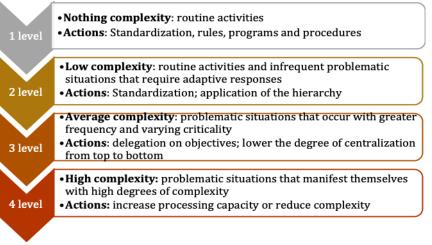
The choice of different coordination mechanisms depends on a large number of factors (internal and external to the organization).

On a cruise ship, a fundamental coordination mechanism is the "chain of command" (direct supervision) and standardization (skills; norms and output). Bosman (2012) states "During a crisis, more than any other time, people look up to shipmaster to provide explanations, information and direction".

Decastri (1997) states that, the choice of coordination mechanisms depends on the level of complexity of the organization, on the level of interdependence of relationships and on the pressure of the organizational results.

The complexity, in turn, depends on the variability and predictability of the reference environment. So, it is possible to put in place organizational strategies with a different degree of complexity. Depending on the information required for operation, specific actions can be implemented. In critical event or crisis, people often don't know what the 'appropriate action' is until they take some action and see what happens. Thus, actions determine the situation. Furthermore, it is less often true that 'situations' determine appropriate action than that 'preconceptions' determine appropriate action. Understanding is facilitated by action, but action affects events and can make things worse. Action during crisis is not just an issue of control. If action is a means to get feedback, learn, and build an understanding of unknown environments, then a reluctance to act could be associated with less understanding and more errors (Weick, 1988).

#### Figure n. 1: different degree of complexity



Source: our elaboration

6

During the Costa Concordia disaster, the direction by way of communication and chain of command was unsatisfactory. The level of complexity created by the crisis has not seen the implementation of actions defined ad hoc for the management of the same crisis.

Shipmaster broke the chain of command because of a supervisor ignoring the disaster (increase processing capacity or reduce complexity). Tyron (2013, p. 4) states about "the importance of shipmaster is the ability to deal with people, both beginners or experienced professionals".

Lois, et. al. (2004) evaluate nine case studies and propose a safety assessment methodology. They conclude that there are four potential countermeasures to address prior to a cruise safety mishap. First, interventions can prevent certain causes of disaster. Here they list proper equipment, training, detailed procedures and preventative maintenance as the appropriate interventions. Second, they list intervention before an incident where enhanced surveys, communication equipment, alarms, remote sensors and check-off list for routine evolutions are imperative. Third, drills to respond to common incidents and special procedures for higher risk evolutions are interventions before an incident. And finally, they enumerate interventions before the consequence of the incident such as response plans, emergency drills, lifesaving equipment, emergency instructions and crew training.

Massey & Larsen (2006, p. 81) indicate "the establishment of a team of people who all know their roles during crisis events makes the management of crisis possible". Wahlström et. al (2015) maintain that there will remain human factors challenges in the operations of control centre, including (i) limited situation awareness due to reduced sense of ship, (ii) information overload due to the plurality of ship and ship sensors and (iii) communication challenges as the result of limited knowledge on the local conditions or linguistic issues. Robbins & Judge (2015, p. 3321) state "only 18% of companies have documented strategies for communicating with employees across cultures".

A ship's master is a specialist in risk management. An obligatory passage plan is always worked out, validated by himself, where the risks of navigation are taken into account. Any modification of this plan is then possible according to the decision of the ship's master or his representative on the bridge but must be accompanied by an automatic new risk analysis.

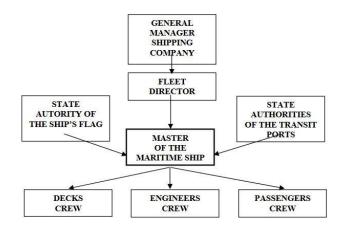
# 3. On-board organization: The hierarchical relationships

The more formal, militaristic organisational structure (hierarchy) on vessels indicate a bureaucratic organization for the nautical/technical branch of cruise ships (Brownell, 2008, p.140). Assigning the cruise ship organization to a highly rigid and bureaucratic form on a scale that contains on the other end of forms contemporary business organizations that feature a highly flexible and, to use Henry Mintzberg's evocative term, 'adhocratic' form, might appear correct at first sight, but in cultural and moral terms most organizations today are hybrid forms situated between both ends of the scale (Hendry, 2006, pp.270-271). The crew is formed by the shipmaster, the deck officers and other people in the service of the ship.

Following Karjalainen (2004, p.78) who argued that "the ship is one of the most hierarchical organisations in the 21<sup>st</sup>century", the on-board organization falls within the powers of the shipmaster (La Torre, 1997; D'Alessio, 1992; Antonini, 2010; Menghini, 1996).

When listing the crew, the navigation code mentions it firstly, with the officers and with all the other persons enlisted for the service of the ship (art. 316 Nav. C.). The shipmaster is at the top of the "on-board hierarchy" (art. 321 Nav. C.). In addition, as "head of the crew", the commander is the first of the superiors to whom people must "obey" and "comply with the instructions" for services and discipline on board (art. 187 e art. 810 Navigation Code). The crew member lends his work to the service of the ship. The crew is structured according to the hierarchical principle with the shipmaster at the top (artt. 187 e 809 N.C.).

#### Figure n. 2 The relationship between shipmaster and crew members



#### Source: Iordanoaia, 2009

The crew members must lend to the obedience commander, conforming to the orders of the superior and conforming to the instructions given about the services and the discipline on board. In case of danger they will have to cooperate in the

8

salvation of the ship (art. 190, 811 N.C.) and they cannot abandon the nautical vehicle up to the order of the commander in order not to incur the sanction (Pisanu, 2013, pp. 857-862; Brunetti, 1947, Torrente, 1964). As for the "command", it can be conferred to a single shipmaster, on the premise of the possession of a certification enabling the exercise of the profession. The "uniqueness" of the command is accompanied by the monocratic character of the same and its "indefectibility", in the sense that it can never be missing aboard a ship in operation (La Torre, 1997; Dominedò, 1961; Righetti, 1987; Sandiford, 1960; Lefebvre d'Ovidio et. al. 2016).

These prerogatives emphasize the objectivity of the command with respect to the subjectivity of the commander, the first indefectibility, the second substitutable (arg. Pursuant to art. 273 N.C.). The proof is that if the shipmaster encounters situations which prevent him from performing his duties (art. 293 N.C., under the heading "Replacement of the commander in the process of navigation") the Navigation Code establishes: "In case of death, absence or impediment of the commander, the command of the ship is responsibility of the deck officers, in the hierarchical order, and subsequently of the boatswain, until the moment in which the shipowner's provisions arrive or, failing these, up to the port of first landing, where the authority in charge of maritime or internal navigation or the consular authority appoints the master for the necessary time".

These are three hypotheses united in the same rule, which at least apparently covers the range of occurrences due to which the head of the crew cannot exercise his assignment. In fact, as far as death is concerned, it occurs when a person has ceased to live and the appointed commander (arg. ex. Art. 273 N.C.) by the ship owner disappears on the ship. The event affects the subjective profile, but the objective and inalienable aspect of the case remains namely the command. Therefore, not being able to remain a ship without the shipmaster, the command will be assumed ope legis (just the disposition of the art. 293 N.C., Paragraph 1) from the highest in degree. With regard to the impediment, it turns out to be of such a magnitude that it does not allow the holder to resume his office, the highest able will remain in the role of shipmaster "until the time when the ship owner's instructions come" (arg. Ex art. 293, co 1), thus confirming the ineluctability of the command on board when a ship is in operation. In cases where the commander is not for any reason on board the ship: as is the case, for example, if the ship is in port and the shipmaster has is off board, or in case of a fall into the sea, etc. the command will be automatically (art. 293 N.C. Paragraph 1) to the next level. Certainly the absence should not occur in the case of abandonment of the ship in operation for any reason, breakdown, etc. The absence can only take place when all the means to save it have been implemented (arg. ex art. 303 N.C.) (1).

For its part, the crew must cooperate "until the commander has given orders to abandon the ship", thus ensuring the "conservation of the navigating heritage and

<sup>(&</sup>lt;sup>1</sup>) The commander must do his utmost for the safety of the ship and of the people on board, and must go down last from the nautical vessel (art. 303 c. Nav., comma 2). If, instead of waiting for this essential duty, the commander thinks to save himself before the passengers and the crew, he can cause the loss of the ship: *Relazione ministeriale di accompagnamento al codice della navigazione*, n. 704. Available on the www.giustizia.it/giustizia/protected/1303127/0/def/ref/BAR951284/.

the physical integrity of the people on board" (ex art. 190 N.C.)(<sup>2</sup>). The crewmembers appointed to gather passengers at the muster stations did not follow established procedures (MIT, 2013, p.83). These non-procedural tendencies could be a reflection of the Shipmaster conscious decision to deviate from the planned route and to sail too close to the shoreline at an unsafe distance and at high speed (MIT, 2013, p. 3). Furthermore, MIT (2013, p. 83) states, "there was chaos and confusion, lack of communication; in other words, complete disorganization, mainly because nobody from the bridge coordinated the emergency with the muster list and the related procedure for abandon ship".

# 4. Methodology

We conduct an exploratory study through a qualitative approach by using a case study methodology. Empirically, the article is based on a large critical event "Costa Concordia cruise liner" event occurred in 2012.

For this reason, the paper uses a sequential design, starting with the literature review using the online database through specific keywords (crew management, maritime and cruise industry, chain of command, disaster management, coordination) in order to assume the current state of research. In the second phase, we proceeded to develop a survey by evaluating the Costa Concordia case study.

Case studies are a valuable tool to encourage a debate on specific problems and can help to emphasize the fact that the underlying issues will often be complex and require careful consideration. In analyzing a problem, often determining what happened in the past is critical to any further analysis.

Even the observations can help to appreciate the complexity of causal relationships as they occur in the real world, such as the potential nonlinear and recursive flows of events and the potential multiplicity of causes, both proximal and distal (Yin, 2015). Furthermore, the cause of what happened is the first step in correction or solution of the problem.

This qualitative analysis looks at in-depth case study. However, this study provides a broad overview to create an awareness of incidents which are rare but may be more costly than other maritime industry market.

<sup>(&</sup>lt;sup>2</sup>)https://www.personaedanno.it/dA/2d3d6423c2/allegato/Testo%20sentenza.pdf. It is therefore clear that the commander supervises all the functions that relate to the "salvation" of people and things. Of course, this "high" power certainly cannot violate the spheres of competence of figures, even subordinate ones, who nevertheless have technical and scientific skills "; see ZUNARELLI, A. ROMAGNOLI, 2012, pp. 94 ss.

# 5. The case of Costa Concordia

The crew, formed by the commander, the deck officers and other people serving the ship, is a complex social structure, regulated according to the principle of subordination, instrumental in the timely implementation of the provisions given by superiors and such as to enable the objectives to be achieved.

On the night of 13<sup>th</sup> January 2012, the Italian cruise ship Costa Concordia listed and capsized after hitting a reef at Isola del Giglio, an island on the Italian coast. The ship had 3206 passengers on board and crew of 1023, totaling 4252 people. When the ship sailed near the island about 150 meters away from the coast, it hit a rock hidden at a depth of about 8 meters below the water, tore a 48.8 meter gash in the port side of the ship below the water line.

Two long strips of steel were sheared from the ship's hull as a result of the impact tearing the hull of 70 meters. The impact resulted in water gushing into the engine and generator resulted in propulsive power failure, electric power failure and instrument malfunction. The ship on emergency power moved by means of inertia and rudder, drifted and capsized. The disaster cannot be traced back to the area of any maritime accident. The responsibility of the Costa Concordia shipmaster is fundamental both by providing a bad example of decision making in relation to the safety of the ship by diverting from the intended route and also by not ensuring that the crew received proper coordination during the crisis. The lack of effectiveness of shipmaster clearly contributed to the severity of the accident, mainly found: "in his behavior in opposition to the rules of conduct, of which the precautionary rules are intended to prevent certain events and in the failure to observe the level of diligence, prudence and expertise, due and to be required for the top guarantee position held in function of its apical role"(<sup>3</sup>).

Critical phase of the event	Complexity	Coordination mechanism to be implemented	Execution
9.45 pm - Impact	Nothing	Programsandprocedureswiththeapplicationofsafetyproceduresfor	reporting; The crew is

Table n. 2 Hierarchical relationships to manage critical event

<sup>&</sup>lt;sup>(3)</sup> See also, Cass. Pen Section IV, 20 January 2017, n. 6376 states that the shipmaster is obliged to supervise all the functions inherent to the protection of the persons on board, and holds a position of guarantee towards all the people who work on board the ship under his control, due to its natural hierarchical position with respect to those who are on board.

		passengers and crew	critical events by the shipmaster and cannot give any information to the passengers
10pm -Black out	Low	Requireadaptiveresponses,withStandardizationandapplicationofhierarchythe	No. The crew called the Prato police to raise the alarm
10.43pm -General emergency	Average	Delegationonobjectives;lowerthedegreeofcentralizationfromtop to bottom	Yes. Passengers are advised to go to the meeting points wear the life jacket
10.54pm - Abandon ship	High	Increase processing capacity or reduce complexity	Yes. Each abandon ship drill shall include the actions required. Issued by the Second Command - in English
11.23pm - Abandon ship	High	Increase processing capacity or reduce complexity	NO. Shipmaster and Officer abandon ship with one of the life boats; Without the implementation of the safety Rota

Source: our elaboration

The question of the dissolution of the chain of command remains unclear as the other officers would have taken the lead in the on-board hierarchy.

The Court of Cassation itself pointed out that "the complex organization needed to navigate and govern a huge cruise ship, such as the - Costa Concordia - was in any case characterized by a top-down command structure, in which individual possibility of intervention by the holders of positions of responsibility GAVE way in the face of the decision-making choices adopted by the owner of the command.

The crew members, following the impact, weren't informed by the bridge and couldn't provide information to passengers". Solicited by the second in list, the shipmaster issued the "general emergency" only at 10.43pm and three minutes later the passengers were invited to go to the meeting points and put on the life jackets.

At 10.54pm the shipmaster orders the abandon of the ship. On the "abandon ship" alarm, passengers were left alone, there were no senior officers of the ship to guide the passengers to safety. At 11.30 pm the shipmaster left the ship. The disaster claimed 32 lives (26 passengers and 4 crew) (MIT, 2013).

#### impresa i rogetto - meetrome journal of Management, il 5,

## 6. Considerations

The disasters impact transit routes and source markets, by changing consumer perception of destinations as being safe (Prideaux, Laws, & Faulkner, 2003).

In the early 2000s, Faulkner (2001) and Ritchie (2004) summarized past research to develop the managerial frameworks to guide the industry professionals on how to manage disasters before, during, and after they occur. These frameworks were subsequently utilized to understand the industry's response to the different types of disasters and to establish the determinants of their effective management in the specific context.

The Costa Concordia disaster provides a valuable opportunity to understand how deficiencies in coordination and organizational behaviors significantly influence outcomes. The overall impact of the deficient application of these factors contributed heavily to the severity of the disaster. A series of failures of these elements occurred within the command structure of the crew from the top to the middle management regarding interactions (or lack of them) with the passengers and their direction. The generating cause of the event must be found in a series of contributing factors which form the rings of the so called "chain of errors". The fact that cruise ships carry large and diverse groups of people means that their officers, staff and crew need a clear understanding of human responses in emergencies and an ability to deal with crowds. The areas directly related to human behaviour and crowd control might include the ability of giving clear and reassuring order, dealing with passengers 'special needs and keeping order, reducing or avoiding panic. In emergency situations, the key personnel (who has responsibility for the safety of passengers might lead and direct the people, assess the situation and provide an effective response and recognize specific behaviours of passengers and other personnel. The success of the above can be achieved by the adequate training, specializing on the proper communication with the passengers and the use of specific equipment. Confusion often caused by poor or ineffective communication among the various parties involved, such as the misunderstanding arising from arrange of native languages among the crew. To a large extent, this type of error can be reduced by careful selection and adequate training of crew.

Among the most obvious, there is a diversified series of behaviors, including omissive ones: the lack of the coordination mechanism between command and crew, the incomplete and incorrect application of the discipline in terms of procedures, practices, and norms. Moreover, after the accident occurred, the management of the reticent information to the

competent maritime authority, the incorrect activation of the Appeal Role, and, again, despite the presence on board of over 1000 people in need of assistance, the abandonment of the ship in danger were also factors (against the disposition art. 303 c. nav.).

Massey & Larsen (2006, p. 81) state "A team of people who all know their roles during crisis events make the management of crisis possible". In this case all this did not happen and the doubt remains - in front of a defined series of responsibilities, also clear and defined by the rules, as envisaged by the Navigation Code - that perhaps the elements of unpredictability still represent a frontier with respect to which the values and the people's behavior is constantly put to the test.

The critical aspects that can be drawn from the management of this event are that some deficiencies have gone unnoticed, hurried diagnoses have been accepted, frontline activities have been taken for granted, the organization's resilience has been underestimated and the chain command was completely not observed.

From the point of view of the human resources involved in the event it would be necessary to develop greater communication, favoring discussion also interdisciplinary, dedicating time to activities on the front line; define the errors to be avoided with the staff, spreading a "no blame" culture.

Today and over the next few years, with the expansion of interest in cruise ships, there will be two principal areas, which need to be considered namely shortage of skilled crew and crew training.

It is obvious that the human element plays an important role, either negative or positive, in the safety and the critical event management of cruise ships. The cruise industry might explore new recruitment and training opportunities in order to enhance the passengers and cruise vessels' safety, including the following:

- Increasing the training opportunities to acquire new skills, which will allow crew to progress their career with the cruise company.
- Providing more onboard training resources, including a specialist trainer to meet the arising needs.
- Exploring new and innovative training techniques.
- Liaising with universities and other professional establishments in order to develop training programmes for those wishing to work in the cruise industry.
- Providing management training, which introduces new values of leadership, motivation and team building.

The task of organizations capable of managing the unexpected is to promote an attitude that allows routines to become superficial, that expectations take over and those blind spots that turn into an incapacity to

see potentially disastrous events for the organization (Weich & Sutcliffe, 2010). It is obvious that the human element plays an important role, either negative or positive, in the safety and the critical event management of cruise ships.

The task of organizations capable of managing the critical event (disaster or crisis) is to promote an attitude that allows routines to become superficial, that expectations take over and those blind spots that turn into an incapacity to see potentially disastrous events for the organization (Weich & Sutcliffe, 2010).

## References

Airoldi, G., Brunetti, G., & Coda, V. (2005). *Corso di economia aziendale*. Il mulino Antonini, A. (2007). *Trattato breve di diritto marittimo* (Vol. 2). Giuffrè Editore.

- Aritz, J., & Walker, R. C. (2014). Leadership styles in multicultural groups: Americans and East Asians working together. *International Journal of Business Communication*, 51(1), 72-92.
- Barling, J. (2001). Management practices affect occupational safety. *Ontario, Canada: School of Business, Queen's University.*
- Bosman, M. (2012). Leading during a crisis: 7 lessons from the Costa Concordia disaster. Retrieved from http://www.strategicleadershipinstitute.net/news/leading-during-a-crisis-7-

lessons-from-the-costa-concordia-disaster/.

- Brownell, J. (2008). Leading on land and sea: Competencies and context. *International Journal of Hospitality Management, 27(2),* 137-150.
- Coppola, D. J. (2015). *Introduction to international disaster management*. Third edition. Butterworth-Heinemann.
- Costa, G., Gubitta, P., & Pittino, D. (2014). Organizzazione aziendale: mercati, gerarchie e convenzioni. McGraw-Hill.
- D'Alessio, W. (1992). *L'organizzazione a bordo della nave*. Cedam.
- Decastri, M. (2011). Leggere e progettare le organizzazioni: lezioni a più voci di organizzazione aziendale.
- Denisova, T. (2007). Internal communication problems in a multinational company Lamor Group.
- d'Ovidio, A. L., Pescatore, G., & Tullio, L. (2011). *Manuale di diritto della navigazione.* Giuffrè Editore.
- EUROSTAT (2018). Maritime Transport Statistics Short Sea Shipping of Goods.Retrievedfromhttp://ec.europa.eu/Eurostat/statistics-explained/index.php?title=Maritime\_transport\_statistics-\_short\_sea\_shipping\_of\_goods#Short\_sea\_shippingby\_type\_of\_cargo.
- Faulkner, B. (2001). Towards a framework for tourism disaster management. *Tourism management*, 22(2), 135-147.

- Fracaro, K. E. (2008). Keys to Attaining Employee Trust. *Contract Management*, 48, 12-16.
- Freire, P. E. M. (2004). *An investigation into the design of an unmanned ship.* University of London, University College London (United Kingdom).
- Galbraith, J. R. (1973). Designing complex organizations, 1973. *Reading, Mass: Adison-Wesley Publishing Company.*
- Garvin, D. A., & Roberto, M. A. (2005). Change through persuasion. *Harvard business review*, 83, 26-33.
- Ghaderi, H. (2019). Autonomous technologies in short sea shipping: trends, feasibility and implications. *Transport Reviews*, 39(1), 152-173.
- Gibson, P., & Papathanassis, A. (2010). The cruise industry—emerging issues, problems and solutions: review of the 2nd international cruise conference, Plymouth, UK, 18–20 February 2010. *International Journal of Tourism Research*, 12(4), 405-407.
- Gossard, W. H. (1995). Marine safety on board cruise ships.
- Cornett, D. K. (2014). Costa Concordia Leadership and Communication Paul Weston Ransbury South New Hampshire University 19 October 2014.
- Global Facility for Disaster Reduction and Recovery (2017). Annual Report. From https://www.gfdrr.org/sites/default/files/publication/GFDRR%202017%20An nual%20Report\_0.pdf
- Guest, D. E. (1987). Human resource management and industrial relations. *Journal of management Studies*, *24(5)*, 503-521.
- Guest, D. E. (1991). Personnel management: the end of orthodoxy?. *British Journal of Industrial Relations*, 29(2), 149-175.
- Hamann, R., & Peschmann, J. (2013). Goal-based standards and risk-based design. Ship Technology Research, 60(2), 46-56.
- Hendry, J. (2006). Educating managers for post-bureaucracy: The role of the humanities. *Management learning*, 37(3), 267-281.
- Hmieleski, K. M., Cole, M. S., & Baron, R. A. (2012). Shared authentic leadership and new venture performance. *Journal of Management*, 38(5), 1476-1499.
- HR Council for the Nonprofit Sector (n.d). *Getting the right people selection & hiring.* Retrieved from http://hrcouncil.ca/hr-toolkit/right-people-selection.cfm
- International Maritime Organization (IMO) (2007). Strategy for the development and implementation of E-navigation. London: Author.
- International Maritime Organization (IMO) (2011). Principles of minimum safe manning: Resolution 1047. London: Author.
- International Maritime Organization (IMO) (2015). Human Element. http://www.imo.org/OurWork/HumanElement/Pages/Default.aspx.
- Johnson, W. G. (1980). MORT safety assurance systems (Vol. 4). Marcel Dekker Inc.
- Kai, J. (2006). Cross-cultural communication. *The Foundation Years*, 2(3), 99-101.
- Karjalainen, M. (2004). Prisoners of Freedom: A Study on Worldview of Contemporary Finnish Seamen.
- Kim, M. S., & Sharkey, W. F. (1995). Independent and interdependent construals of self: Explaining cultural patterns of interpersonal communication in multi-cultural organizational settings. *Communication Quarterly*, 43(1), 20-38.

- La Torre U. (2014). Salvaguardia della nave, dovere di esercitazione e profili di responsabilità. *Rivista Trimestrale di Dottrina Giurisprudenza legislazione italiana e straniera*. II-IV -2014.
- La Torre U. (2018). Considerazioni a margine del disastro Moby Prince, *Rivista Trimestrale di Dottrina Giurisprudenza legislazione italiana e straniera*. I -2018.
- La Torre, U. (1997). *Comando e comandante nell'esercizio della navigazione*. Edizioni Scientifiche Italiana.
- La Torre, U. (2013). Equipaggio, Comando e determinazione della rotta nella navigazione Marittima. *La Rivista Del Diritto Della Navigazione*, Vol. XLII (1),95-128.
- Leveson, N. (2011). *Engineering a safer world: Systems thinking applied to safety.* MIT press.
- Lim, K. (2017). The Role of the International Maritime Organization in preventing the pollution of the world's oceans from ships and shipping. *UN Chronicle*, 54(2), 52-54.
- Lois, P., Wang, J., Wall, A., & Ruxton, T. (2004). Formal safety assessment of cruise ships. *Tourism management*, 25(1), 93-109.
- Massey, J. E., & Larsen, J. P. (2006). Crisis management in real time: How to successfully plan for and respond to a crisis. *Journal of Promotion Management*, 12(3-4), 63-97.
- Menghini, L. (1996). *I contratti di lavoro nel diritto della navigazione* (Vol. 1, pp. 1-710). Giuffrè.
- Miller, K. J. (2001). Structural integrity–Whose responsability? Ordinary meeting of The Institution of Mechanical Engineers, London.
- Ministry of Infrastructures and Transports (MIT) (2013). Cruise ship Costa Concordia – marine casualty on January 13, 2012 (Marine Casualties Investigative Body). 1-176. from http://gcaptain.com/wpcontent/uploads/2013/05/Costa\_Concordia\_- Full\_Investigation\_Report.pdf
- Mintzberg, H. (1985). *La progettazione dell'organizzazione azi*endale. Soc. Ed. Il Mulino.
- Nguyen, T. T., Ghaderi, H., Caesar, L. D., & Cahoon, S. (2014). Current challenges in the recruitment and retention of seafarers: an industry perspective from Vietnam. *The Asian Journal of Shipping and Logistics*, 30(2), 217-242.
- Nikkhah, R. (2012).Cruise disaster: three confirmed dead and 69 passengers still missing. The Daily Telegraph (UK). Archived from the original on 14 January 2012.
- Pescaroli, G., & Alexander, D. (2015). A definition of cascading disasters and cascading effects: Going beyond the †œtoppling dominos†metaphor. *planet@ risk*, *3*(1).
- Porathe, T., Prison, J., & Man, Y. (2014). Situation awareness in remote control centres for unmanned ships. In *Proceedings of Human Factors in Ship Design & Operation, 26-27 February 2014, London, UK* (p. 93).
- Puisa, R., Williams, S., & Vassalos, D. (2019). Towards an explanation of why onboard fires happen: The case of an engine room fire on the cruise ship "Le Boreal". *Applied Ocean Research*, 88, 223-232.

- Righetti, G. (1990). Trattato di diritto marittimo, III.
- Robbins, S. P., Judge, T. A., & Vohra, N. (2015). *Organizational Behavior*, Seventeen Edition. Pearson Education India.
- Ruben, B. D., & Kealey, D. J. (1979). Behavioral assessment of communication competency and the prediction of cross-cultural adaptation. *International Journal of Intercultural Relations*, 3(1), 15-47.

Rugiadini, A. (1979). Organizzazione d'impresa. Giuffrè editore

Sauer, J., Wastell, D. G., Hockey, G. R. J., Crawshaw, C. M., Ishak, M., & Downing, J. C. (2002). Effects of display design on performance in a simulated ship navigation environment. Ergonomics, 45(5), 329-347.

Schoenberg, A. (2005). Do crisis plans matter? A new perspective on leading during a crisis. *Public relations quarterly*, *50*(1), 2.

Scialoja, A. (1943). Corso di diritto della navigazione, I.

- Spouge, J. (1997). Risk criteria for use in ship safety assessment. *TRANSACTIONS-INSTITUTE OF MARINE ENGINEERS-SERIES C-*, 109, 75-84.
- Turati, C. (1998). L'organizzazione semplice: la sfida alla complessità inutile. Egea.
- Tyron, O. M. (2013). Determinants of Successful Everyday Communication of Sailors in International Crews. *Journal of Educational and Social Research*, *3*(3), 209.
- Wang, J. (2006). Maritime risk assessment and its current status. Quality and *Reliability Engineering International*, 22(1), 3-19.
- Weick, K. E., & Sutcliffe, K. M. (2010). Governare l'inatteso. *Trans. Fabio Dovigo. Milano: Cortina.*
- Wieck, K. E. (1988). Enacted sense making in crisis situation. *Journal of Management Studies, 25*, 305-317.
- Wilson, K. A., Salas, E., Priest, H. A., & Andrews, D. (2007). Errors in the heat of battle: Taking a closer look at shared cognition breakdowns through teamwork. *Human factors*, 49(2), 243-256.

Wong, W. (2003). *How did that Happen? Engineering safety and Reliability*. Professional Engineering Publishing, London.

- Wright, P. M., Dunford, B. B. & Snell, S. A. (2001). Human resources and the resource based view of the firm. *Journal of Management, 27*, (6), 701-721.
- Wright, P. M., Gardner, T. M., Moynihan, L. M. & Allen, M. R. (2005). The Relationship between HR Practices and Firm Performance: Examining Causal Order. *Personnel Psychology*, 58(2), 409-446.

Yin, R. K. (2015). *Estudo de Caso-: Planejamento e métodos*. Bookman editora.

Yin, R. K. (2015). *Qualitative research from start to finish*. Guilford Publications.