Communication Processes in the Hellenic Fire Corps: A Comparative Perspective

Elpida-Melpomeni Chlimintza

Submitted in fulfilment of the requirements for the Degree of PhD

Department of Sociology, Anthropology and Applied Social Sciences
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SEPTEMBER 2009

Photo: Grammattiko fire, 22/08/09

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ABSTRACT

My research explores critical issues involved in emergency management in a front-line, emergency service – the fire brigade – in Greece, Germany and Britain. It is designed to identify the problems in the communication conduct among fire-fighters during emergency responses, to examine the causes of these problems and to suggest ways to overcome them that should allow European countries to adopt more effective policies. It aims to make a contribution to the academic study of crisis management in organizations through an analysis of actual, real-time, responses to emergencies such as industrial fires, plane crashes, road traffic accidents and train collisions. Organizations such as fire services are seen as communication events and a platform where shared cognitive meanings and shared value commitments shape the actions of the interactive agents. In this vein, emergencies are the outworking of communicative disruption in organizations, in which fire services face a triple jeopardy: they have to manage other organizations' crises (such crises include those arising in large chemical and oil factories), their own crises (for example, failing to communicate because of inadequate radio spectrum) and natural disasters (such as earthquakes and forest fires).

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Acknowledgements

I would like to dedicate this thesis to my mother.
For better or for worse, she was always there.

My friend Dr. Georgia Giannakopoulou was a great *aesthetical* support throughout my effort to write my Ph.D. thesis; for that, and for her help with editing my thesis, I thank her. Of course, this thesis would not have been made possible without the support and encouragement of my dearest supervisor, Professor John Eldridge. I would also like to thank Dr. Robert Gibb for co-supervising my thesis and Professor Bridget Fowler as the postgraduate convenor. Dr. Panos Dendrinos I would like to thank for being my friend during my stay in Glasgow. I would also like to thank my former supervisor Mr. H.F. Moorhouse who was unable to continue with my supervision due to his retirement. My sister Sia, I would like to thank for proof reading the final version of the thesis. There are a number of people I would also like to thank from the Hellenic Fire Corps but first and foremost, I feel obliged to lieutenant general Christos Mitropetros for granting me the secondment to conduct this research, to lieutenant general Stylianos Stefanides for providing me with the rare opportunity for a lower-ranking officer to attend the annual meetings of the high-ranking commanders of the fire stations in Attica, to colonels Yannis Velentzas and Fotios Kalachanis for grating me access to the HFC recordings and, finally, to fire-fighter Vasilis Kazoukas for showing me how to manage the recorded archive. I would also like to thank the operations and control personnel of all the BFRSs I visited but foremost the operations and control employees of the SFRS1, as well as the control personnel of the EFRS2. They were the most hospitable hosts. My thoughts go out to the chief fire-officer, the officers and the fire-fighters of LFB that accepted me as part of their team and included me in their daily conduct. I would especially like to thank Thomas and Monika Weckesser for becoming my 'German family', although I gave Thomas a very hard time as my guide in the LFB. Last but not least, I would also like to thank the University for the Financial Support. I am certain that I forgot to mention some very good Glaswegian and Greek friends and co-workers, who will forgive – I hope – my forgetfulness.

Author's declaration

I hereby declare that this thesis represents my own independent work, except when referenced to others. It was carried out in accordance with the regulations of the University of Glasgow.

I further declare that the work in this thesis has not been previously submitted for any other degree.

ABBREVIATIONS AND ACRONYMS

9/11	The attacks on the World Trade Centre on the 11th of September 2001
ADD	Aufsichts- und Dienstleistungsdirektion – Organization for emergency planning and management
ARES	High-ranking operations' officer of a certain district where more than one fire stations operate
ARMA	High-ranking HFC officer responsible for monitoring the whereabouts of the appliances deployed on-scene
BA	Breathing apparatus
BFRS(s)	British fire and rescue service(s)
BT	British Telecom
CC	Control commander
CCC	Command and control centre or command and control room or control room. This is the department that receives the emergency calls and dispatches the organizational resources
CFO	Chief fire-officer
COP	Control operator
D	Dispatcher
EB	Electronic board
EC	Electric company
EFRS(s)	English fire and rescue service(s)
EM	Electronic map
FAA	Federal aviation administration
FAA	Federal aviation agency
FDNY	Fire department, New York
FEMA	Federal emergency management authority. FEMA coordinates federal agencies and departments during emergency responses providing a command structure. It deploys personnel to the appropriate regional office and the incident area but does not have its own critical response assets, such as buses, trucks, and ambulances. FEMA provides funding for

	equipment and training. The role of FEMA is similar to the role the SGCP undertakes in the Hellenic case
FF	Fire-fighter
FI	Fire investigator
FO	Fire-officer
FRS(s)	Fire and rescue service(s)
HFC	Hellenic fire corps
HQ	Headquarters
HW	Hauptwache – central fire station
IC	Incident commander, the highest ranking officer on the incident-grounds.
ICS	Incident command system
KRONOS	Operations' officer responsible for coordinating at least two appliances when responding to an emergency event
LC	Lieutenant commander
LFB	Ludwigshafen Fire Brigade
MCU	Mobile command unit
MoA	Memorandums of action
NEADS	Northeast Air Defence Sector
NIMS	National Incident Management System
NIS	National interpretation system
NIS	National Intelligence Agency
NORAD	North American Aerospace Defence Command
NW	Nordwache, North fire station
NYPD	New York, police department
OPS'	Operations
OSE	Hellenic railways organization
OTE	Hellenic telecommunications organization
PAPD	Port authority police department
Pers. comm.	Personal communication is an expression used to label conversations and interviews with the FRSs organization-members.

PO	Press office
PR	Public relations
RTC	Road traffic collision
SC	Station commander
SFO	Station fire-officer
SFRS(s)	Scottish fire and rescue services(s)
SGCP	Secretariat general for civil protection. The SGCP is an organization that plans for large-scale natural or technological disasters and undertakes the coordination of the organizations that respond to such emergencies.
SO	Station operator
SOP	Standard operating procedures
USDA	United States department of agriculture
WTC	World Trade Centre

INTRODUCTION

1. Defining the problem: How I came up with my research topic

I joined the Hellenic Fire Corps (HFC) in 2001. One day I read an advertisement in one of the Athenian newspapers announcing that the HFC was looking to hire a female Communication and Mass Media graduate. It was a public servant's position with a permanent contract. I passed both the physical tests and the written examinations only to discover that I was not supposed to be the HFC spokesman – or, in my case, spokeswoman – but rather start off as a junior fire-officer and work myself up the ladder of hierarchy before I could put my expertise to good use.

Since that time, I found myself often looking for a way to express my suppressed desire to make the most of my knowledge in Communication and the Mass Media. I presumed that if I found a way to do that, I would succeed in avoiding the destructive – rather than unproductive – feeling of boredom, a sentiment of isolation both from my environment and myself. At the same time, the organization might benefit from any suggestions I could make with regard to ameliorating some of its conduct.

The answer came almost a year after I started working for the HFC. One day I was visiting the command and control centre (CCC) of the HFC, where all the emergency calls are received and processed. I was listening to the conversations both between control personnel and civilians and amongst control employees. People were shouting at each other. Operators were struggling to make sense of what the civilians were trying to tell them. Dispatchers were trying to establish communication with the operations' units, mobilize them to the incident-grounds and forward the necessary information so that the fire-fighting teams could work out their response. At the same time, control officers were shouting at control operators or dispatchers to do this or take care of that. Was that where strategic decisions were made whilst responding to emergencies? Could those decisions made under such noise and pressure from the commanding officers protect the responders in action or effectively determine the distribution of the organization's resources? In such an environment, could control employees establish an effective information exchange

process with other first-responder organizations? Maybe this was my chance to put my knowledge about communications to good use.

My professional experience taught me that communication between first-responder organizations during an emergency situation could largely determine the overall result of the response, the most critical phase of emergency management (Hale, Dulek and Hale 2005). Yet, at that stage I was unable to clearly define the problem. I felt that Alpaslan, Mitroff and Green (2004) made sense when they argued that the definition of a problem is often more the outcome of inquiry than its starting-point. My 'starting-point' was a hunch that something in the communicative process during emergency responses was not "quite right". However unscientific, this hunch was the product of a wealth of experience.

So, in 2004, I began to take note of how personnel interacted during emergencies and non-emergency situations, so as to establish common patterns of behaviour. First, I had been struck by the extent to which, and the reasons why, communication could be distorted amongst participant actors. Second, it appeared to me that communication patterns during emergency responses seemed to connect to communication patterns during periods when the organization is not responding to emergency situations, often referred to either as non-crisis periods or periods of organization "equanimity". Colleagues from the HFC disagreed with this second point. During casual conversations, they all argued that communication during emergency responses was different from "normal" communication (Bourrier 2002). This view was sustained by the argument that in responding to an emergency during crises "common problems multiply exponentially" (Rosenthal, Boin and Comfort 2001: 18), and so a stress-related "change" could negatively influence employees' attitudes towards colleagues, emergency co-responders and the public.

During my visits to the control room, which had become rather frequent, I realized that the distance between the theoretical and the practical level was substantial. In theory, one may assume that the communicative interactions amongst the participant actors in emergency responses are instrumental. So, the communicators have a shared understanding of the messages exchanged and the context of the message is purely informational. Officers, operators, and dispatchers employed in the CCC usually receive information from civilians describing an emergency situation and indicating its location.

They then forward this information to the operations' units initiating the necessary mobilization of resources on the incident-grounds. Depending on the type and size of the emergency, CCC personnel disseminate necessary information to other first-responder organizations, such as the police or the ambulance service. The operations fire-officers in command contact the CCC personnel for any further assistance required in the form of resources or additional information.

In general, such organizational conduct becomes a "rational-instrumental entity", whereby communication is held to be "a measurable and objective element of reality" (Putnam, Phillips and Chapman 1996: 376). This system/information theory approach perceives social systems as composed of "actions rather than people" (Burkart 1980: 221). Communication is seen as a central means of achieving the official goals of formal organizations that are by definition hierarchically structured (Perrow 1976 and 2002). Within this context, strategic management researchers usually approach organizations as neutral, rational and technical systems of production. Distortion in communication occurs when the messages exchanged within the organization contain non-informational outputs which may lead to dysfunctional and ineffective organization outcomes (Jacobson in Manning 1992; McQuail and Windahl 1981). This is how I had pictured the emergency conduct among the participant actors in an emergency response when I first joined the HFC.

In practice, however, I realized that, first, there exist more than the "two" aforementioned "main actors". The actual number of the interacting agents during an emergency response is the sum of the employees involved in it; those occupied in the CCC, those on the fire grounds, those in any other division of the fire and rescue service, and those in any other participant first-responder organization. When communicating, these employees filter the information through their on-the-job training, work experience, knowledge of operating procedures, general educational level and idiosyncrasies, beliefs, hopes, fears and attitudes. In effect, these factors may lead to misinterpretation of the information which, in turn, may result in incorrect assessment of the gravity of the reported emergency and affect the decision-making process (Kakabadse 1991).

So, gradually, I decided to adopt a more reflexive perspective and consider organizations as "communication events" (Pepper 1995: 3). As such, organizations are not only actions but primarily the interactions between agents (Boisot, MacMillan and Han 2007). Therefore, this approach is predominantly about the sentiments, the symbolism, and the language of the actors, as the medium through which the process of selecting, retaining, and rejecting environmental stimuli is realized. As Manning (1992: 41) maintains "communication is often as much about symbolic matters, ideas, beliefs, and assumptions as it is about information." In such a context, communication becomes a transactional process, in which messages exchanged between the participant actors may be informational or non-informational, rational or irrational, deliberate or accidental, significant or insignificant (Rapport 2001; Manning 1992: 43; Putnam, Phillips and Chapman 1996; Pepper 1995; Jablin et al. 1987) and define organizations' routines and rituals (Manning 1992: 54; Bourque and Johnson 2008). Naturally, such an increasing complexity in the communication conduits may disturb the dissemination or "diffusion" (Boisot 1995) of the necessary information.

Complexity increases as civilians input the initial information concerning an emergency. Their perception during an emergency may be distorted, for example due to stress, and this distortion can be communicated to the CCC and, so, it becomes the basis of the evaluation of the incident. After accumulating and assessing the information, the dissemination may encounter technical difficulties such as radio malfunction or frequency congestion. The inter-organizational communication between first-responder organizations may be problematic, since organizations do not necessarily share the same objectives. All these issues emerging from the communicative interactions amongst the HFC employees were both significant to the organization's routine and non-routine conduct and inextricably related to its performance. Yet, unless someone undertook the task of describing and embedding them into the personnel's routines and practices, they could not be systematized and become a part of the organization's policies. And so I decided to move towards mapping the conduct of the various organization-members.

2. Defining emergencies

Before I began, I had previously taken as self-evident: crisis and emergency. In the interdisciplinary literature on crisis, the extended use of the term in many fields of research contributed to its diverse and inconsistent conceptualization (McCormick 1978: 352; Boin 2005: 167; Gundel 2005). *Crisis* is usually attributed a non-routine, unstable, less-understood and urgent character (Kakabadse 1991; Quarantelli 1988 and 1998; Roux-Dufort 2007). A more functional approach conceptualizes *crisis* as a period of discontinuity, marking the breaking point in a patterned process of linearity (Crozier 1964; Wagenaar 2000; Boin 2005).

Crises may be events or experiences (Roux-Dufort 2007). Although crises may be spatially and temporally defined (Shrivastava et al. 1988: 297), events such as earthquakes, forest fires, problems at large chemical and oil factories, and terrorist attacks indicate that crises spill over from local areas into the international arena, making *transbounderization* (Porfiriev in Rosenthal, Boin and Comfort 2001: 343) an additional, intrinsic, characteristic of crises. As events, crises are clustered as environmental, and fiscal (Mitroff, Alpaslan and Green 2004: 180); or depending on their causes, as industrial and natural (Fritz 1961; Quarantelli 1978; Perrow 1999; Shrivastava et al. 1988).

As experiences, crises are defined by "the manner in which the behaviour of these individuals is shaped by the institutions and organizations within which they act" (Turner and Pigeon 1997: 133). For example, fire-fighting personnel perceive crises as part of the organizational work, as incidents they should respond to. How these perceptions are shaped, as well as the distance between these perceptions and the fire-fighting personnel's actions, present *ruptures* that may partly be the causes of crises. These causes of crises are, therefore, not merely external but intrinsic to the organization and tightly coupled to organizational structures, routines and practices (Perrow 1999, Boin 2005, Ursacki-Bryant et al. 2008). As Rosenthal, Boin and Comfort (2001: 348) maintain "we [may] recognize the simplicity of any urge to declare crisis as something 'out there' instead of emphasizing its endemic qualities."

From signifying the "layers of danger" in a society largely defined by the non-random generation of risk (Beck 2002) to delineating situations unwanted, unexpected, unprecedented, almost unmanageable that cause widespread disbelief and uncertainty (Rosenthal and Kouzmin 1997; Rosenthal, Boin and Comfort 2001) crises come to indicate "a serious threat to the basic structures of the fundamental values and norms of a social system" (Rosenthal, Charles and 't Hart 1989: 10; Beck 2002; Comfort 2005). As the "trans-" prefix of *transbounderization* comes to the fore, preventing, responding to or mitigating crises takes on a "trans-organizational" (Rosenthal, Boin and Comfort 2001: 297) and "multi-disciplinary" (Comfort 1994; Boin and t'Hart 2003) character, where crisis prevention or management cannot be achieved on the organizational level alone. Events which, taken in isolation, may not warrant classification as major incidents, may do so when considered together (Coombs 2004).[1]

The term *crisis* with all its semantic and practical variations constitutes only an acute type of event the fire and rescue organizations deal with. So, I will use the term *emergency* instead of *crisis* to refer to the majority of the events the FRSs manage. Fire and rescue organizations also encounter *routine* and *set* events (Cressey, Eldridge and MacInnes 1985: 125-158). *Routine* events are incidents fire-fighters frequently respond to, such as kitchen or chimney fires. These events have a less unexpected character than emergencies and their consequences are more or less anticipated. *Set* events are the ones fire services attend, such as festivals, for precautionary reasons.

Different fire and rescue services introduce different terms to classify the incidents they attend. The HFC uses two categorizations: *incident*, for the less demanding and rather routinely occurring emergencies and *crisis*, for the more complex emergencies that may require an extended mobilization of organizational resources and a multi-agency response. The BFRSs classify the fires they attend as primary and secondary. Primary are those fires that erupt in buildings and mobile homes, means of transport, storages, plants machineries, agricultural and forestry premises. This category also includes fires that require the attendance of more than five appliances, as well as secondary fires that have

[1] *Major incident response and investigation and major incident policy and procedure review*, http://www.hse.gov.uk/enforce/mirai.pdf, accessed: 31/03/2008.

fatalities or casualties that require rescue operations.[2] The LFB use the term *incident* when three appliances are mobilized and the term *SOS-calls* when six or more appliances are necessary. Six is the total of the LFB professional fire-fighting units.[3]

3. From being an insider to becoming an outsider in the HFC

When I first started to design my research on the HFC, I made three false assumptions based on my status as an HFC fire-officer. First, I assumed that I could easily obtain a secondment to examine the communicative interactions of the HFC employees during emergency responses. Second, I thought that obtaining a secondment would automatically allow me access to important information, such as recorded conversations during emergency responses. Third, I assumed that my colleagues would be comfortable talking about their professional experiences.

Yet I misjudged the situation. The rationale of the bureaucratic processes of the HFC contradicted my assumptions. Despite the fact that I requested to be seconded a month before my matriculation as a Ph.D. student, the official reply approving my request was issued almost five weeks after my research began. Furthermore, in order to access the material I required, I had to submit an additional official request. Moreover, many of my colleagues were less than keen on talking freely about their interactions during emergency responses. These obstacles made me realize that for both the formal organization and my colleagues, my status had changed: I was *auditing* the organization-members' performance rather than being one of the organization-members.

[2] London Emergency Services Liaison Panel (LESLP), 'Major Incident Procedure Manual': July 2004; Fieldnotes, December 2006; March 2007 and April 2007. Note that fieldnotes also comprise of internal correspondence (e.g. unofficial memos without protocol numbers) among organization-members and correspondence between organization-members and I.
[3] Fieldnotes, August 2007.

a. Approaching the HFC

Although I did not realise this at the time, before I started my research, I followed the same initial steps William Whyte (1955) took when exploring the social structure of an Italian slum. I experienced that a very efficient way to examine the routines of the HFC was to be a part of the natural surroundings of the organization-members (Cassel and Symon 1994; Hammersley and Atkinson 1995; O'Reilly 2005). Being part of the natural surroundings meant conducting participant observation. While I was still an *insider* visiting the control room, nobody appeared to be bothered by my presence. I was an organization-member who was in the control room undertaking a certain task. My job was to keep track of what went on, so that I could inform the media. However, when I revisited the command and control centre as a *researcher*, my behaviour was under constant scrutiny. I felt eyes following me around the room like they never had before although I was making the same rounds as I had in the past. I came to realize that this was the HFC personnel's reaction as they had never before experienced their interactions being constantly observed. Instead of the control personnel coming to terms with my being in the control room, they gradually became very conscious of my presence. They were even more concerned when I started listening to their conversations via telephone or radio that are recorded on a 24-hour basis. However most of them were worried about whether I was listening to their private conversations rather than their professional conduct.

b. Investigating the recorded conversations

Formally, I was not allowed to listen to their private conversations. The commander of the control room appointed a fire-fighter employed as a technician in the command and control centre in order to make sure that I was listening to the material that had been pre-approved by the HFC officials. Nonetheless the fire-fighter was absent for most of the time I spent in the recording room; so, I was the only one to censor the material I used. Obtaining formal/official approval was one of the first obstacles I encountered in my efforts to get access to the communication patterns during emergency responses amongst fire-fighters and between the HFC employees and other first-responder organizations. Recordings are classified data disclosed only when subpoenaed after being directly requested by the district attorney. Hence, obtaining permission was a complicated and a time-consuming

process. Seven senior officers, including the chief fire-officer of the HFC, had to sign two official documents before I was allowed any access to the recorded conversations. In order to precipitate the process, I decided to pursue the matter through informal channels. I was aware that if the chief fire-officer was positively disposed towards my request, the chances were that I would be able to access this material. The chances would further improve if the other six higher-ranking officers were on good terms with him and did not object to my request. According to the existing regulations, if an objection was raised, the rest of the senior officers should address it. That would mean more documents to be signed and therefore more time spent. Eventually, a *veto* was raised by the deputy chief fire-officer, who excluded documents marked as confidential. However, I was allowed to listen to the conversations with the consent of the CCC commander and deputy commander, as the vague wording of the final version of the official document signed left it to their discretionary power.

When I entered the room where the recordings are kept, I felt that I was well on track with regard to collecting my data. What I had not realized at that point was that the recordings archive was just part of my data. The whole process of working in the HFC, planning and readjusting my research, accessing the information I considered valuable was in itself participant observation. So I entered the room and started searching for large-scale emergencies. The filing system was as good as inexistent. What I soon discovered was first, that the communicative interactions were all written on a DVD-recorder and unless I had the exact day, time, and telephone line of the conversation, it was difficult to trace the set of interactions I was looking for. A second issue was that major incidents were either dated 20 or 30 years ago, or that the few that occurred during the past four or five years were kept in the CCC commander's office, away from indiscreet looks or the occasional careless employee who might overwrite the rewritable DVD with the conversations. So I had to choose amongst small- or medium-scale emergencies. Going through the recordings, I realised that the HFC does not engage in routinely responding to large-scale disasters. Hence, selecting and analysing more routine emergencies provided a relatively closer encounter with the organizations' customs and practices.

I decided to work with the largest recorded emergencies since the early 2000s. The initial idea was to analyze the recorded radio conversations between the dispatchers and the operations' units, which I consider to be the "frontstage" (Goffman 1990) communication

during emergency responses. That is because communicative interactions via radio are the result of a "backstage" decision-making process which is conducted via the telephone – for which the recordings existed – or face-to-face interactions, which I occasionally had the opportunity to observe as a researcher. I was surprised – and so were the CCC officers at the time – to find out that the radio recordings did not exist. Some radio communications were recorded, but the entire body of the recordings was kept in the Hellenic Telecommunications Organization (OTE) and in order to access it I had to have special permission from the National Intelligence Service (NIS). I had already spent over two weeks seeking permission from the HFC. I located every officer who was involved in signing the official release of the documents. I interrupted their daily schedules in order to explain the significance of my research and gain their consent. The NIS is an organization with different routines and practices that has in the past interfered with security issues concerning the HFC.[4]

I thought it would be best if I examined the recorded material on three levels, as suggested by Shannon and Weaver (1949) and re-defined by Boisot (1995): the technical, the semantic and the pragmatic levels with my emphasis being on the semantic level. First, on a technical level, I investigated the physical characteristics of the communication that defined, for example, the accuracy in transmission. The second level of analysis was the semantic aspect of communications, namely the interacting agents, the messages they exchanged and their interpretation of these messages (Eco 1977, 1989 and 1990; Davou 2000). My principal concern was to investigate the performing agents in their roles, how they perceived and enacted their roles in the emergency response. To this end, symbolic interactionism facilitated the understanding of the circumstances under which the analysis of the messages exchanged during the communicative processes was realized (Boden 1990; Travers 2001). Symbolic interactionism defines the ad hoc characteristics of the communicative interactions among organization-members. These explanations reveal the existence of common patterns that govern the communication conduct prior to, during and after the emergency response. Symbolic interactionism emerged from recognizing the ad hoc character that "defined the dynamics of specific interactions" but it was also charged with failing to set "them in the wider context of an accepted social structure, neglecting social structure" (Stryker 1987: 85). In addition it was criticized for "rejecting hierarchy" hence underplaying the "importance of power differences", on the grounds of focusing on

[4] Fieldnotes, May 2006.

"the episodic and viewing life in terms of fluid, transient encounters" (Gouldner 1970: 379-86). Therefore, this approach was not considered "capable of incorporating adequately the social significance (and therefore the sociological significance) of social structure, in particular of social class and power distributions within society" (Stryker 1987: 85). Despite these criticisms, in this case at least, symbolic interactionism facilitated the understanding of the communication conduct of organization-members. The technical infrastructure of the communication conduct was addressed, as well as the technological issues involved in facilitating or hindering the information exchange process during the communicative interactions of the organization-members. Finally, the pragmatic level offered a comparison between what the actors engaged in the emergency responses thought was happening and what actually took place (Mills 1963; Edgington et. al. 2004).

Apart from the technician and the ex-senior officers of the HFC, no one else in the CCC knew that the software used by the recorder was not compatible with the technology used to operate the radio frequencies. Therefore, conversations from the time the new radio system was installed – in the summer of 2004, just before the 2004 Olympics – until the research began in April 2005, were not recorded. Previous conversations could not be researched because they were not electronically formatted but instead written on tape. In addition, there were no devices available to listen to this kind of tapes and most of the tapes were already destroyed due to inadequate storage. Luckily, the telephone communications amongst the participant fire-fighters in the emergency responses were recorded. Yet, not all telephone lines were recorded. The ones that had no tab on them were the telephone lines of the commander and the lieutenant commander of the CCC and therefore I could not examine the interactions in the higher layers of the command structure. This led me to think that the decision-making process is selectively scrutinized and accountability is selectively ascribed, when communication misconduct occurs. Moreover, the recorded material also gave me the option to study the discussions amongst CCC employees in the CCC. That is because, when the telephone receivers were not properly in place, they operated as microphones and kept on recording the conversations amongst the control personnel. This happened quite frequently.

In the end, I examined ten cases, a total of 34 hours and 34 minutes. This time is net, without prolonged pauses and private conversations. At the same time, I read some of the incident reports in order to have a better understanding of the emergencies I selected to

examine. I also scrutinized the mobilization protocols that had to be followed so as to establish if they were applied or the reasons why they were overseen. In the latter case, I tried to arrange a number of interviews in order to verify my initial observations (Silverman 1995).

c. Interviewing HFC personnel

Interviewing HFC personnel became a *complementary method* (O'Reilly 2005) which I used to enrich or verify my observations and the results of my analysis of the recorded conversations. They served to compare how fire-fighting personnel thought they responded to emergencies with how the recorded conversations indicated they responded. The structure of the interviews depended on the content of the observations I intended to correlate and, thus, most of the time they were semi-structured. I now know that interviews, as a primary research method, would not have sufficed to examine communication processes as they only provide insight into the interviewees' experiences of these processes (Oswick and Richards 2004; Samra-Fredericks 2004). In the fire-fighting organizations there is little chance of assessing the extent to which interviewees are operationally experienced. A chief fire-officer of a U.S. fire service insightfully comments: "never assume anything. Some people may have 30 years of experience; others may have had only one experience repeatedly for 30 years" (Crane 2005: 89).

The recordings provided me with the selection criterion of HFC interviewees. I chose to talk to more than twenty employees who were involved in the recorded cases that I examined: I used the incident as a starting point in order to discuss the strengths and weaknesses of the response and continued conversing about the routines and practices of the organization. Moreover, the answers provided by the HFC personnel indicated the distance between their spontaneous reaction during the recorded emergency responses and their considered reaction during the interview. For example, in the recordings some operations' employees depended on the control personnel in real time and were thankful for their contribution in the emergency response whereas during the interviews the same people stated that the control room's role in the emergency response was secondary, or – as was the case with one of the interviewees – redundant.

However, interviewees were concerned with the recording device. There were three types of reactions towards the recording of the interview: first, there were those who despised the recording of the interview and made it quite explicit. Another group of interviewees claimed not to be bothered by the recording of the interview. There were two kinds of reactions within this group. Some of the interviewees commented on the recording device during the interview: "is this still running?"[5] To my reply on the fact that no names will be mentioned in the thesis, the reactions from this category of responders raised another interesting question: "I have nothing to fear from discussing these issues with you. [Anyway] this assignment of yours is going to be judged from an outside organization, isn't that so?"[6] "I still have time before starting paying any price"[7] "Ah, I will be reassigned after this interview to serve to the borders."[8] As soon as the interview began, others stared right into my eyes, a common reaction on the part of people who are giving television interviews and are advised as such in order to forget about the camera. This group of interviewees adopted a formal style of speech and a politically correct approach to the problematic issues faced during emergency responses, which aligned with the decisions made by the government. Yet, they would be blunt about those problems as soon as they thought they were told that the interview was over and therefore assumed that the recording process had ended. Finally, some of the interviewees did not seem to mind and spoke their minds. The interviewees' reactions emphasized their fears with regard to their status in the organization if their opinions were exposed. Moreover, these reactions also pictured me as that person who could undermine their status. Once more, I was portrayed, albeit rather implicitly, as an *outsider*.

Although interviews were a complementary method in the HFC, I soon discovered that, in some of the other fire and rescue services, they would be my primary source for understanding organizational behaviour (Burns 1977). This combination of research methods allows an ethnography of organizations, which is best known in organizational studies as Organizational Communication Culture (O.C.C.) designed to reveal the daily sense-making activities of organization-members (Bantz 1993; Johnson 1993; Pepper 1995; Boyce 1996).

[5] Fire-employee A, interview, April 2005.
[6] Fire-employee B, interview, May 2005.
[7] Fire-employee C, interview, May 2005.
[8] Fire employee D, interview, May 2005.

4. A comparative research: The British Fire and Rescue Services

In 2004, around the time I began my research, the *9/11 Commission Report* was published in the US. The Report acknowledged the importance of first-responder organisations and the fact that whereas the police and the ambulance services had received much attention, fire-service practices had yet to be looked into. Furthermore, even though various disasters had emphasized problems such as preparedness and effective communication, cooperation and coordination, especially at the level of policy making, there was no existing, systematic, study of any of the European fire services, including efficient crisis management, with the exception of the *Bain Report* (2002) which served as the cornerstone for the modernization of the British Fire and Rescue Services (BFRSs). Yet, in what gets characterized as a *risk society* (Beck, 2002), fire services are crucial institutions. They are the first to respond to major disasters, such as earthquakes, floods, forest fires, problems at large chemical and oil factories, and, of course, terrorist attacks. These kinds of crises spill over from the local areas into the international arena, potentially claiming hundreds of thousands of lives and inflicting substantial environmental and financial damage to state and private property (Shrivastava et. al 1988; Smith 1990; Rosenthal, Boin and Comfort 2001). So, I decided that designing a comparative research could allow substantial comparisons of the FRSs routines and practices on a European level.

a. The initial encounters

Whereas I already had a clear idea as to how to approach the Hellenic service I knew nothing about how fire services operated in the U.K. Once, while I was walking around in Glasgow, thinking about how I was going to approach the fire and rescue services in the UK, I literarily stumbled across one of the local fire stations. It appeared to be very quiet. I was tempted to ring the bell and pay them visit. Yet, my supervisor's words were dominating my thoughts: "do not visit any of the fire services before you have a good idea about whether and how you are going to approach them or else you will contaminate your field." However, I could not see how one visit could jeopardize an entire research project which was yet to be decided. And so, I rang the bell. However absurd, in retrospect, this was one of the best decisions I made. One of the on-duty fire-officers answered the door and as soon as I introduced myself, he let me in. I explained who I was and how I would be

interested in touring the facilities and have a brief conversation about how fire fire-fighting was organized in the UK. He agreed to show me around the station. We walked the training facilities, the offices, the garage where the fire trucks were docked, and the dormitories. The officer had some time on his hands, so we discussed about the rather prolonged series of strikes in 2002, the changes introduced in the fire and rescue services across Britain, the problems between the male and the female fire-fighters. I knew next to nothing about the reformation of the fire services and the relationship between the male and female fire-fighters made an impression on me. I always expected the BFRSs to have done away with the complications of having female fire-fighters in a predominantly male uniformed-organization. The officer talked about how whistleblowers had challenged the services' attitude towards both fire-fighting personnel and 'strangers'. It was an uncomplicated and very illuminating visit. I had a very good feeling about my being there. Yet I was rather unaware of the problems awaiting to emerge, as I tried to get permission to conduct my research in the BFRSs.

A few days later, I was looking into the issues I had discussed with the fire-officer. I was reading about how the Fire Brigades Union (FBU) organized the strikes and how the negotiations between them and the government were conducted. I was also pondering the relationship between the male and the female employees. So I decided to start researching the organization through contacting the women's representative in the FBU. I sent her an e-mail explaining who I was and what I was researching and she agreed to help me with my research. Before signing, she ended her response with the phrase "in unity". I was rather struck by this expression for it was emotionally charged. I wondered why someone who was pursuing equality issues between fire service employees would sign: "in unity." So I sent her another email not only to thank her for her support but also to ask why she would use such an expression. I must have insulted her in a way I was unaware of, for she never answered my calls or responded to my messages or the emails I sent her.

This second approach was rather intimidating. If a representative of the union took offence in what I could only describe as cultural diversities between the Hellenic and the British services, and excluded my presence as a potential researcher of the BFRSs based on a simple query with regard to a communication practice, then I wondered whether his/her behaviour represented the usual practices of the union members; perhaps, it did. During the time I was researching the BFRSs, I wrote two formal letters addressed to the president and

vice-president of the union seeking to verify the validity of my data by requesting the union's point of view. I cannot be sure whether these letters reached their destination or not, for they remained unanswered. After these initial encounters, I decided to concentrate on planning my research in the HFC. I allowed myself to be conveniently reassured by my supervisor that the fire and rescue services across the UK would respond promptly to my requests. I was yet to face some difficulties in accessing the BFRSs that not only delayed my fieldwork but, most importantly, challenged my commitment to my research.

b. Attempting to access the BFRSs and to integrate in their routines

After I finished gathering my data from the HFC, I started approaching some of the fire services in the UK. However, the various BFRSs reacted in different ways to my research request. The diversity of their responses led me to believe that there was not one unified "UK Fire Service", as the Independent Review Committee maintained (Bain G., Lyons M. and Young A.: 2002: i), but locally organized services with diverse practices, at least on an administrative level. I will use acronyms for the services in order to avoid exposing these individuals who were very accommodating by allowing me access to observe their interactions. Hereafter, the acronym EFRS refers to the English Fire and Rescue Services, whereas the SFRS acronym is used to address the Scottish Fire and Rescue Services.

Initially, I instigated correspondence with six BFRSs, requesting permission to be a participant observer of the organizations' conduct. If I was granted such an extensive access in their daily conduct, I could request the examination of the recorded conversations during emergency responses, access documents and conduct interviews. Eventually, three Scottish and two English FRSs allowed me access; each of them to a different extent. Some allowed me to be a participant observer. Others allowed me to conduct a few interviews and denied me access to other archive material. The access allowed by the administration of each FRS I approached also affected the degree of my integration in the daily routines of their employees. Restricted access gave me very little chance of familiarising with the personnel. Hence, I was unable to establish myself as an insider and I remained someone who was simply doing research; someone who occasionally was taking up a FRS employees' time to ask questions, *forced interactions* (Gergen and Gergen 1981; Navrides 1994), as I was soon to discover. Whilst accessing the organizations, I

requested to interview individuals with specific qualifications and experience, in order to obtain an understanding about the various aspects of the organizations. I wanted my selection to favour "persons who are especially knowledgeable with regard to various activities and bodies of knowledge" (Pearsall in Filstead 1970: 346). Yet, the final selection of BFRSs' employees was made predominantly by the administrations of these organizations. This I considered to be a manifestation of their intention to control as many aspects of my research as possible. So, I was not surprised when most of the BFRSs denied me access to their recorded conversations based on the Data Protection (Amendment) Act 2003,[9] as well as some of their documents, such as emergency plans or incident reports, despite the fact that I committed myself to not disclosing any information that could potentially harm any of the individuals directly or indirectly involved in my research.

These restrictions called for a reconsideration of my research methods. I realized then that a researcher needs to be flexible and reconsider or readjust the methods he/she intends to use the moment they appear to stop serving the purpose of the research. These reasons appear to depict the rationale of the organizations' bureaucratic culture and the dynamics developed between myself and the organization.

- **The SFRS-1**

So, for my first official approach the BFRSs, I needed sympathetic organization-members. That is one of the reasons why I decided to contact one of the Scottish services where a relative of my supervisor at the time was employed as an operational fire-fighter. This served as a starting point. My experience as a fire-fighter in the HFC had taught me that informal contacts were usually more effective than formal approaches. The SFRS-1 employee acted as a liaison between the administration of the SFRS-1 and myself. He indicated that a formal letter should be addressed to the head of operations in order to process my request. The request would be submitted to the chief fire-officer who would make the final decision with regard to granting or denying me access to the service. Negotiations on this formal level were conducted promptly and within two weeks all the necessary arrangements for my six-day fieldwork were made. The second reason for

[9] Paragraph 2, section 1, subsection IV.

approaching the SFRS-1 was based on the fact that it is a large non-metropolitan fire and rescue service. A service of such size could offer relevant material.

As soon as I arrived to the city where I would spend the following week, one of the fire-officers on-duty came to "collect" me from the train station. The verb "collect" was used by fire-officers when picking me up and dropping me off at the fire station on their way to emergencies or training sessions. The use of this verb made me think that, to them, I was probably another task to process. The officer took me to the fire station where the necessary sleeping arrangements were made. I was accommodated in the fire-officers' dormitories. As accommodating as these arrangements were, what I realized in retrospect is that I was isolated from the rest of the group, although no more than the fire-officers usually were. Whereas the fire-fighters were occupying the first floor of the station facilities, the fire-officers used the ground floor which had immediate access to the offices and the garage where the fire trucks were stationed. These arrangements underlined a status structure whereby fire-officers' facilities in the fire stations were located next to the fire-engines' garage, as if to enable the officers to display an exemplary promptness in responding to emergency alarms, by being provided with the opportunity to reach the appliances first. There was a similar rationale in the arrangements made in other fire stations as well as the Headquarters, where the fire-officers' offices were always located on the top floor.

On the next day, I was provided with office space and the necessary stationary. However, the office I was given was exactly opposite the chief fire-officer's office and previously occupied by the deputy fire-officer. Both the fire-officers' dormitory and the prestigiously located office were seen by the operations' personnel as favourable treatment on the part of the administrative employees. This first came to my attention when, on the second day of my visit during tea time, one of the fire-fighters commented that I was affiliating with the people "next door", as the operations' employees usually referred to the senior administrative personnel. It was then that I realized that fire-fighters were not talking freely in my presence despite my efforts to fully participate in their daily routines. Before long, I detected that my behaviour was constantly scrutinized. When I missed taking my breakfast with one of the watches, one of the officers commented after seeing me exiting the dormitory only 30 minutes past breakfast-time: "This is not Greece. We start at 08:00 o'clock, you know", and while pointing at his watch he added with a bit of a smile: "You

are late." In another case, when I missed joining another watch for tea-time, a fire-fighter remarked: "Are you fraternizing with the others *next door*?" I soon realized that in being a participant observer I was expected to fulfil a certain role. When I failed to respond to these expectations, I was reprimanded, albeit humorously. Often, I was not allowed to fail or, in other words, deviate from the role I had chosen to adopt. On one occasion, while sitting in one of the daily afternoon training sessions, watching the fire-fighters handling their climbing gear, in a somewhat relaxed state, one of the fire-fighters put the rope in my hand: "You are a fire-fighter, aren't you? It's your turn to do it." "My turn"; this had never happened in the HFC, not even when we were receiving our basic training in the Fire Academy. However, in this case BFRS rules applied to everyone and training was everybody's prerogative and obligation in order to achieve the degree of commitment necessary to develop trust amongst the organization-members. By the end of the research period, familiarity and acceptance were expressed by humorous remarks, such as: "So, which is your favourite watch?"

This degree of integration, I believe, was not only the result of my managing my presence in the fire station. It was also the result of the administration's decision to allow me access to the personnel's routines. Although the administration of the SFRS-1 allowed me unlimited access to the fire station and headquarters' (HQ) premises and provided me with a key-card to access the HQ so as to make sure that I attended to my own needs without constantly interrupting their daily routines, an incident temporarily impeded my efforts to integrate. One evening I attended a rescue operation launched due to a road traffic collision (RTC). During this emergency response, a fire-fighter came up to me and asked for my assistance. For security reasons I was wearing their uniform and the fire-fighter probably assumed that I was one of the retained personnel. Two things happened that made some of the fire-fighting personnel temporarily question my ability as a fire-fighter which in turn jeopardized my status as a researcher. First, I was unfamiliar with their tactics, their procedures and their terminology and, therefore, unable to assist. Second, the safety officer on-site approached us to explain that I should not participate in the operations. The awkwardness of the situation led to a realization that was confirmed during my visits to the BFRSs: first, the limits of the roles undertaken by organization-members were strictly observed and, second, I would not get away with being on the incident-grounds and looking at those who where labouring under strenuous circumstances. However different my role was assumed to be by the administrative personnel, in the fire stations or on the incident-grounds, I was not a *researcher* but a *fire-fighter*.

Interviews, casual conversations, listening to recorded dialogues during emergency responses, reading documents and the option of witnessing emergency responses were permitted on the grounds that I would not expose operations' personnel to any danger or reveal information that would harm any of the individuals directly or indirectly involved in my research. All the fire-fighting and administration personnel had been informed in advance about my visit. Some of the higher-ranking officers offered to discuss with me. The chief fire-officer instigated a brief conversation, but as I had not specifically requested to meet with him, he could not grant me time for an interview. During the six-day period, numerous casual conversations took place with administrative and operations' officers, control personnel, and fire crews. At the end of my visiting the SFRS-1, I was invited to revisit the station, if I considered it necessary.

- **The SFRS-2**

I approached the SFRS-2 during the same time I started corresponding with the SFRS-1. The reason why I chose the SFRS-2 is that it is one of the largest fire and rescue services. Almost three months after I contacted the SFRS-2, the public relations officer requested that both my supervisor and I attend a meeting with three employees from the HQ: a senior operations fire-officer and two non-uniformed administrative employees. In essence, my supervisor and I were interviewed – before I was given the chance to interview – so that the SFRS-2 employees could decide whether and to what extent my accessing the organization would be allowed based on how the SFRS-2 would benefit from my research. As the PR officer put it: "We want to see what's in it for us".

I was asked to submit a disclosure form, a formal letter from the HFC certifying my status as a fire-officer and, finally, put one of the SFRS-2 administrators in contact with one of the HFC fire-officers so that my status would be re-confirmed via telephone. I provided a list of names and contact numbers to facilitate the communication between the SFRS-2 and the HFC officers. Approximately two months after the meeting, the SFRS-2 had not replied as to whether permission was granted. When I re-contacted the SFRS-2, I discovered that they had sent an e-mail to the HFC using an address which was not included in the list I had provided. Consequently, no one from the HFC replied to the email. During our correspondence, I had explicitly mentioned that it is not typical for the

HFC personnel to establish communication via email and that the best communication avenue would be to call them. Moreover, the SFRS-2 personnel did not inform me about this breakdown in communication. Otherwise, I would have intervened in the process. I soon managed to establish contact between one of my supervising officers in the HFC and the administrator of the SFRS-2, who was appointed to see my research request through. Eventually, a telephone interview was set up, with me acting as a liaison between the SFRS-2 and the HFC.

So, approximately six months after the SFRS-2 was approached, I received an email confirming that my requests were approved. When the second email arrived, I appreciated that I had to redefine the parameters of my research: participant observation, listening to the recorded conversations during emergency responses, and examining the emergency plans were denied. In addition, my liaison to the SFRS-2 requested that I sign an agreement according to which I was to disclose to the SFRS-2 any information I acquired during my interviews before I included it in my Ph.D. thesis. The existence of such an agreement explains why the SFRS-2 personnel did not object to my using the recorder, unlike what happened in the HFC. This I regarded as a very interesting development in my communication with the organization. I was an outsider whose intentions the SFRS-2 administrative personnel considered wary from the very beginning of our interaction.

Soon after our interview – meeting with the SFRS-2 personnel I was provided with a schedule titled: "ELPIDA_CHLIMINTZA_WORK_EXPERIENCE."[10] However interesting my accessing the SFRS-2 may have been as an experience, it could hardly be considered as "work experience." It felt like the organization was treating me like a trainee on her first day at work. Perhaps they were trying to slot me into the existing structure of social relationships, as they already had a place for 'trainee' but not for 'researcher', so this was how they tried to 'integrate' me and manage my presence. Nonetheless, it seemed that the SFRS-2 intended to create as much distance as possible between myself and the organization-members. That became clear when they refused to allow me to speak to some of the fire-fighters. The administration tried and managed to maintain my status as an outsider. As intensively as I tried to familiarize and identify with them during my visits in

[10] Fieldnotes, 12 March 2007.

the command and control centre, control personnel would not reciprocate my intentions. "So we have to watch what we are saying?" one of them asked me.[11]

During that same visit, which was one of the two visits I made to the command and control room, another interesting incident took place. According to the schedule that was issued and disseminated to these employees whom I would interview, my visits to the control room would last two hours. That evening, a few minutes before this period of two hours expired, the watch officer looked at his watch and commented upon the time left and if it was enough for me to conclude the conversation. I realized that it was time for me to leave. However, he did ask one of the employees on-duty to give me a lift home, commenting upon the lack of sensitivity on the part of the administration as to not making arrangements for my return given the late hours of my visit. During my second visit at the command and control centre, the watch manager appointed one of the control employees to stay with me in order to answer my questions with regard to the mobilization processes. However, she was instructed not to go into the details of the mobilization protocols. Due to this development, the continuous restrictions and my unsuccessful integration, I informed my liaison that I would not go to the third scheduled meeting with the command and control centre.

The control personnel's reluctance to familiarize with me can be justified on the grounds that the communicative interactions amongst organization-members during emergency responses are all registered in the command and control centre. Hence, the personnel are under constant and continuous scrutiny not only by the administration of the organization but also by the police. When investigating an incident in which the fire service is involved, the police usually requests the recordings from the control room – that is the recorded conversations between control and operations' personnel and control employees and civilians – so as to examine the content of the information exchanged and how this information was assessed by the professionals in order to mitigate the consequences of the emergency.

In contrast, operational fire-fighters are less preoccupied with denying access or obstructing integration as is the HQ personnel. Not being in the vicinity of the HQ or not

[11] Control employee, pers. comm., 23 March 2007.

sharing the same routines with the HQ personnel, operations' personnel have developed their own practices and have a different understanding of the everyday emergency conduct of the organization. Therefore, I was delighted when after being acquainted with some of the SFRS-2 operations' personnel they decided to offer me the opportunity to witness a training session, which was not initially scheduled in my "work experience" programme. I also welcomed another four casual conversations. These conversations were instigated by operations' personnel and were authorized by my liaison in the HQ. Generally, as is usually the case with high-ranking personnel, regardless of the post they occupy, their commitment to the formal conduct of the organization is stronger than the lower-ranking employees', due to the career opportunities for advancement. Therefore they are less eager to expose the organization's weaknesses.

- **The EFRS-1**

I approached the EFRS-1 at approximately the same time as the SFRS-1 and 2. My choice was based on the fact that the EFRS-1 is one of the largest metropolitan fire and rescue services in the UK and has responded to major disasters. I thought it would be an invaluable experience to conduct research in such an organization. So, I requested to be a participant observer in one of the fire stations and listen to the recorded conversations during one major incident. After approximately ten months of negotiations, my request was denied. One of the most significant arguments during the negotiation period was that both my participation and the examination of the recorded conversations could potentially jeopardize the anonymity of the individuals involved and expose the organization. Eventually, the EFRS-1 granted me limited access to the organization's conduct. They scheduled three interviews with a control supervisor, a non-uniformed employee and a fire-officer, who were willing to provide me with an account of one of the latest incidents the service encountered. The control employee and the fire-fighter had prepared a detailed account of the events that occurred when the major incident took place. The non-uniformed senior member of the emergency management team had prepared a formal presentation that lasted almost as long as the interview was scheduled for. Therefore, I did not have much time for questions. Moreover, this employee was not prepared to answer any other questions except those concerning the incident. In addition, they all requested that the interviews would not be recorded. Both their structured narrations and their request virtually excluded me from actively participating in the interview process. Hence, it

appeared that I was provided with the information that the EFRS-1 intended to provide me with.

However, there was an omission that made an impression on me. Although during the negotiation period it was made clear that I was not to be allowed to listen to the recorded conversations during emergency responses for security reasons, on the day of the interviews, I was not asked to provide any form of identification. The only form of identification I had supplied the EFRS-1 with was the formal letter of reference that the HFC had sent me, which I had attached to the initial letter I addressed to the service. The pattern behind accessing the services was beginning to feel very familiar. Both the SFRS-2 and the EFRS-1, were large organizations with a history of 'whistleblowers' revealing misconduct in the organizations' internal affairs, adopted a set of bureaucratic practices that impeded unconditional access to their stations and departments (Ruff and Aziz 2003). Both organizations also centralized and exercised control over their employees in order to scrutinize their interactions.

- **The EFRS-2**

After encountering such difficulties in accessing the SFRSs and EFRS-1, I did not expect my endeavours with the EFRS-2 to succeed. The EFRS-2 was chosen on the grounds that in the past a couple of Greek fire-officers maintained unofficial contact with two EFRS-2 employees they met during a conference. These connections proved invaluable. I submitted the research request to one of the two EFRS-2 officers, and within a few days, I was allowed to observe the communicative interactions between control and operations' personnel.

So, I visited the control room of the EFRS-2 and observed their interactions for three days before I came across, on a Saturday afternoon, one senior member of the control staff who was employed in the HQ. After thoroughly discussing my research with her, she suggested that I should visit the various departments in the HQ and get to know how the organization worked. By Monday morning, she had arranged a number of meetings with higher-ranking officers, personnel from other departments of the organization and a visit to one of the fire

stations. She also appointed me a guide who attended to all the details for my upcoming meetings and my visit to the EFRS-2 was prolonged from almost a week to eleven days. The administration was willing to contemplate my being a participant observer in one of the fire stations. However, as I was running out of time, I had to put an end to the negotiations.

I stayed with the control personnel for five days. I was there in the morning and I did not leave the control facilities until late in the evening. The control employees seemed at ease with my presence and willing to answer my questions. The reason behind their friendliness lay in the fact that they considered it as an "honour" to attract "the interest of a person that does research and chose us. It is our first time."[12] All EFRS-2 employees that I met talked to me about their tasks, the changes introduced in the fire services and how they affected both their personnel and their duties. Operations' personnel welcomed me and most of them spent some time explaining how the fire station worked. They displayed their latest equipment and required after the HFC resources. Before I left the station, I was invited to participate in a volleyball game between the youngest and the older employees of the watch. They took pleasure in guessing my age in order to decide whether I belonged to the youngest or the older.

As a participant observer in the EFRS-2, I realized that this research method facilitates the development of unanticipated dynamics. I also appreciated that bureaucratic processes may be as rigid as the interpretation of the organization-members allows them to be. Whereas the EFRS-2 is one of the largest non-metropolitan fire services, the administrative personnel attended to my every request despite the fact that they had very little time to come to terms with my presence there as a researcher.

c. The efforts that did not flourish

I approached the EFRS-3 in 2007, a year after one of the major incidents in the UK during the past five years. My request to access the EFRS-3 was denied by the service's chief fire-

[12] Control dispatcher, pers. comm., 12 April 2007.

officer who maintained that many of the EFRS-3 employees were involved in investigating the incident they encountered a year earlier and, therefore, were unable to accommodate me.

Moreover, I tried to contact SFRS-3 via a contact of my supervisor. I believe that the reason for this unsuccessful outcome was that the contact was merely a fire-fighter low in the command structure. However, at a meeting with the chief inspector of the fire services in Scotland, I met an employee who put me in touch with a senior fire-officer in the SFRS-3. He offered me the opportunity to conduct participant observation. However, the timing was unfortunate as my secondment from the HFC was almost over.

5. An "out of the blue" development: Expanding my research to the Ludwigshafen Fire Brigade

My approaching the Ludwigshafen fire Brigade (LFB) was a rather surprising development, mostly attributable to my supervisor at the time, who thought that because of my fairly good knowledge of German, I could include at least one German brigade in my research project.

Before I approached a German fire brigade, my expectations were that the effort would fail. There were two reasons for my pessimistic assumption. First, there was no previous attempt made by the HFC to work with a German fire brigade on an operational level. Therefore, there were very few contacts established between Greek and German fire-fighters. The second regarded the stereotypical notion that the German bureaucracy would be an impediment to conducting participant observation. I expected that the correspondence between the HFC, the University of Glasgow and any of the German fire brigades would be time-consuming and would exclude participant observation on the grounds of health and safety regulations, as was the issue in most of the BFRSs. Moreover, based on my experiences with one of the BFRSs, I expected that the data I collected might be censored.

The few German contacts that the representatives from the Fire-officers Union provided me with did not answer my formal letters and the emails that followed. I then decided to seek assistance from one postgraduate student from Germany I met when I joined the University. In one of our discussions, he mentioned that he used to be a volunteer fire-fighter in Frankfurt and that he could mediate in case I wanted to expand my research in some of the German brigades. When I received no answer from the German contacts the union representatives had forwarded me, I turned to my acquaintance and asked whether he could arrange a meeting with one of the brigades he was in contact with. One of my acquaintance's relatives was a politician in the state of Rhineland-Palatinate. She mediated and in less than a month the Ludwigshafen Fire Brigade (LFB) offered me an internship. Ludwigshafen is a city built by the river Rhine, near Frankfurt. It is considered a high risk zone due to the fact that BASF, the largest pharmaceutical company in the world, is located in that area. Within approximately three weeks, a schedule was set, confounding my initial expectations. No documents with regard to my identification were requested, and no disclosure forms were considered necessary.

The LFB provided significant support for my research. Its administration was prepared to offer more than the opportunity to conduct participant observation. Unlike the HFC or the BFRSs, it incorporated me in the routines of the organization. The organization-members considered my attendance at the daily morning meetings with the senior officers of the organization and participation in fire fighting training sessions and emergency responses as self-evident. When senior fire-officers were on their way to meetings and our paths crossed, they always suggested that I join them. I was not considered merely as a "guest" but also as a professional fire-fighter, who would be able to attend to my own needs. I carefully cultivated this climate during my correspondence with the LFB, when I made clear that I had no intention of disrupting the routines of the organization.

As soon as I arrived, I was asked to draft a brief note in order to inform all personnel about the nature of my visit to the LFB. On the administrative level, the research was conducted in an edifice that hosted the Headquarters, the CCC and the Hauptwache (HW: the Main or Central Station). Scheduled and non-scheduled meetings were attended, documents were examined, the CCC communication conduct was observed and casual conversations occurred on a daily basis during the morning and early afternoon hours.

However, language emerged as an impediment during my observing the communicative interactions between CCC and operations' personnel. Whereas the language of the documents and most of the meetings was in High German, casual and informal communicative interactions were conducted in the local dialect. In order to overcome this obstacle, a fire-fighter was appointed to help me understand the language better.

Contrary to any expectations, there was no existing schedule for interviews or activities especially planned for me. During the 21 days I spent in LFB I would put forward a request and the LFB would make an effort to address the request by arranging appointments. Visit to ADD (Aufsichts- und Dienstleistungsdirektion – Organization for emergency planning and management) the organization responsible for coordinating emergency responses on the level of the state of Rhineland-Palatinate and the BASF, one of the largest chemical industries, were arranged upon the aforementioned basis.

On the operations level, the research was conducted in the Nordwache (NW, the North Station). As I was accommodated there, I joined the NW personnel for breakfast, training and incident responses during night-time. Consequently, I was acquainted with every fire-fighter in all three watches and succeeded in establishing familiarity. This climate was further cultivated when I agreed to cook for one of the watches. Within a few hours, all fire-fighting personnel were informed about these arrangements and about the fact that every fire-fighter offered to assist. Furthermore, from that time on, the watch I cooked for was considered by all watches as "my watch." This event indicated that both on the administrative and the operations level integration is accomplished through achieving the sentiment of belonging; watches required establishing belonging promptly and prior to engaging into emergency responses. In emergency situations where risk instigates fear, operations' personnel need to have established trust so as to alleviate the uncertainty created by fear. Hence one has to be accepted as part of the team.

The administrative and operations spheres appeared quite distinct and the dynamics of the relationships in each sphere varied. On the administrative level, the socialization processes occurred in a formal environment. Inclusion in the administrative procedures appeared to require positional similarity, behavioural reciprocity and verbally expressed respect

towards the chain of command. Inclusion based on positional similarity proved an almost automatic process based on credentials such as rank that seemed to make a greater impact and attributed a greater value than my presence as a researcher. I was only asked to respect "die Grenzen" (the boundaries), that is the behavioural and verbal constraints in the communicative interactions with organization-members, especially higher-ranking personnel. The comment that my guide made upon my first visit to the HQ before I met the chief fire-officer concerned the verbal expression of the forms of respect: "I have to ask; do you know the difference between *du* (you, singular form) and *Sie* (you, plural form)? After having spent more than two years in the UK I found the question rather alien to the routine I was used to. For a British fire-fighter, this question would sound awkward as they address each other by their first names. It took a few seconds to return to the Hellenic routines. For a Greek fire-fighter, the meaning of the question was self-explanatory, whereas the English language cannot provide an equivalent for these pronouns. They are both translated as "you." *Du* is used informally to address a friend or a person one is familiar with. *Sie* is used to address a high-ranking officer or an individual one is not familiar with. It was the difficult pronunciation of my surname, along with my intention to create a climate of trust and familiarity, and my insisting upon being addressed by my first name that led the HQ officers to use my first name. Reciprocally, I was allowed to use theirs. Still, when addressing the chief fire-officer or his deputy I would use their surnames. This showed respect and respect reciprocates respect not merely as an abstract concept but as a determinate action. Respecting their practices was rewarded with trust and inclusion.

In contrast, in the BFRSs, regardless of their ranks, organization-members were addressing each other by their first names so as to break down the old quasi-militaristic hierarchical structure, to create a friendlier working environment and to establish trust between organization-members. If I insisted on not addressing them on a first name basis, I would have undermined my efforts to create a climate of trust and, thus, inclusion. The only exceptions observed concerned older individuals, usually senior officers with a military background who offered to be addressed by their first name but appeared to enjoy being addressed by their surname. Furthermore, they enjoyed being addressed as "boss" or "sir" rather than their surnames. One of them made it explicit that being addressed as "boss" or "sir" created the right distance – "die Grenzen" – between the person whose role is to "give orders" and the person whose role is to execute these orders.

Unlike some of the other fire and rescue services, the LFB did not object to granting me permission to examine the recorded dialogues provided that I would not reveal the identity of the individuals holding the conversations. With the help of a fire employee the transcription and the translation of the recorded conversations was realized. However, in both the German and the Hellenic cases the translation of the recorded conversations for the purpose of researching the variations between the information exchange processes, appeared to be both challenging and daunting. The difficulty of translating lies in attributing meaning to the recorded conversations as retrieved from the archives and thereafter, transferring the meaning ascribed from one language into another to achieve a cross-cultural analysis of the researched material. The literal and metaphoric use of language, different in all three cases examined, may have made sense in the context of the FRSs independently but potentially hindered the inter-organizational communication (Lakoff and Johnson 1980; Bachman and Palmer 1982). The use of signs, codes and systems within which signs are organized (Muller 2007) emerged as one of the most significant obstacles in establishing common patterns (Fiske 1990). For example, conversations amongst Greeks translated literally into English may have sounded ridiculous. Nevertheless, in their own context, they made sense of the organization's environment and, occasionally, the information exchange process was effective. In order to address these difficulties, I found that conversation should first be examined in the language they had taken place before I was able to transfer the meaning into English.

Unlike the socialization process on the administrative level, on an operations level the climate changes and formalities give way to familiarisation as the "watch culture" takes over. Comprised of fire-fighters, one or two sub-officers and an officer, the watch implicitly renounces the authority of the hierarchical system and engages in daily activities under the mere authority of an impersonal schedule that dictates their obligations. Inclusion in the dynamics of the watch requires both an interpersonal bonding as well as group interaction. Staging myself as "one of the team" took a lot of effort. Being accepted by the watch proved harder than being accepted by the administrative staff. The difficulties of interaction began on a verbal level during the necessary introductions. One of the watch officers in the NW introduced me as "a Greek colleague"; the officer of the second watch as "Madame from Greece"; the commanding officer of the third watch did not introduce me at all. I was put in the awkward position of introducing myself standing in front of 13 men staring at me like an intruder. This, however surprising, was to become "my watch." Although not apparent in the beginning inclusion in the watch had to do with my gender as

well as being an officer, a foreigner, an observer who would hardly understand their dialect.

It was only gradually that the operations' personnel in the NW started to get used to my presence. They started with not shutting the doors of their dormitories, asking questions concerning the nature of my job in Greece, the payment, and whether the PhD contributed to my career and finances. Quite a few of them would start inquiring where I was going when I was leaving the premises of the NW and why. They kept asking me whether I was following their conversations and whether I understood the jokes the fire-fighters were making. By the end of my visit, some attempted a physical contact in the form of a tap on the shoulder. Some of them commented: "next time you are here, you learn *pfälsig* [their dialect]."[13] On my last day I was properly greeted by "my watch" in a formal gathering where everyone saluted me and then most of them greeted me in an informal manner. In all my dealings with the watches, I was dressed in the Greek fire-fighters' uniform just as they were dressed in theirs. In the few occasions that I appeared in my civilian dress, flirtation interfered with the interactions with the male employees which made me realize the thin line between familiarisation and over-familiarization.

In the HW, the relations were similar. As I was not spending much time with them, when they invited me to a training session I accepted. Furthermore, I offered to assist with the preparations. It made quite an impression on them when, while they were looking for a knife to cut the ropes, I took a Swiss blade out of my pocket. They smiled and included me in the preparations while they started to converse with me. When the training session began, I was assigned to one of the units. So I started putting on my breathing apparatus (BA) which I hadn't used for more than three years. The rustiness in my moves immediately triggered the team's awareness: they assisted me with putting on the BA, as soon as I exited the training area.

To me, the LFB experience was invaluable. Not only because I felt that was my presence there was appreciated, but also because I was given the opportunity to train after being operationally inactive for more than three years. The LFB employees were constantly

[13] Fire-fighter, pers. comm., 13 August 2007.

asking me about the progress of the research, the methods I used, and the results of my analysis. They implicitly raised a slight concern when they inquired whether I would like someone from the LFB to proofread those parts of the thesis that concerned their service. They also expressed an interest in obtaining the results of my research.

6. Revisiting some of the services

When I returned to the HFC after almost four years of absence, I went to the fire chief's office, to report back on-duty, as is customary. Nonetheless, I did not wear my uniform, as I needed at least a week to make a new one. I thought that it would not be an issue if I presented myself wearing a simple suit. My judgement failed me. I was received with very little enthusiasm and I was asked nothing with regard to what I had done during my absence. After only thirty seconds I was out of the fire chief's office again. His deputy saw me standing there and invited me into his office to chat about the summer 2008 forest fires. As soon as I had left the deputy's office, I heard from some of the officers, that the fire chief reprimanded me in my absence with regard to not wearing a uniform. They were even smiling when they narrated the story about how displeased the chief was. I was overwhelmed with disappointment. I still have not written a report about what I have learned during these four years of absence. I still haven't been asked for one. The only thing I have been asked for is to provide a form from the university stating that I have concluded my course; otherwise, demotion is inevitable.

As to the LFB, I revisited the brigade almost a year after I conducted my research there. I was invited to attend the festivities the city of Ludwigshafen organized to celebrate the 60, 45, 20 and 10 years of friendship between Ludwigshafen and the cities of Pasadena (California), Lorient (France), Dessau and Antwerpen (Belgium), respectively. During these festivities, I had the chance to meet many of the volunteer fire-fighters. It was during those three days that I had some very interesting conversations with them with regard to their status in fire-fighting operations. They described how some of the professional fire-fighters were not pleased about volunteers assisting the professionals as, according to the professional fire-fighters, volunteers had little training and experience. What I had observed during my fieldwork was that, regardless of their experience, the training of the volunteer fire-fighters was of the same standards as the professionals.

I did not have the chance to revisit the BFRSs. However, the HM chief inspector of the SFRSs offered me the opportunity to shadow the audits of the Scottish services in the summer of 2008. During the two days that I joined the auditors, merely as an observer, I had the chance to experience how the operational preparedness of the fire-fighters and the administrative competency to address the current needs in emergency planning and promote community safety were assessed. I also appreciated why it took some time with a few of the BFRSs personnel to come to terms with my presence in the services. I was probably seen as another auditor. My suspicions were confirmed when one of the senior fire-officers of the SFRS-2 I had interviewed made a humorous remark about whether there was a chance of my intervening so the auditors would give the service a good report.

Although I did not manage to conduct the research as I had initially planned, I was given opportunities to make a record of the communicative interactions amongst fire-fighting personnel during emergency responses and periods of equanimity as well as between members of the FRSs and myself. The comparisons and contrasts of the patterns of interaction provided me with material that helped me to establish the practices of the organizations.

7. Reflections on conducting field research

Throughout the thesis, the HFC introduced a puzzle. As a bureaucratic organization, the Hellenic Fire Corps should follow a certain code of practice. However, a series of events indicated inconsistency between the letter of the law and the actual practice. For instance, my labour to gain access to the recorded conversations could have failed if the commander of the control room had not have been favourably disposed towards my research project. Moreover, the episodes examined indicate that phenomena such as patronage, favouritism, and clientelism affect the attitudes of organization-members both on and off the incident-grounds. Could the social, political and cultural background endorse such relationships? These issues upon which I shall reflect in the concluding chapter of the thesis influenced my perspective as a researcher.

Moreover, what puzzled me the most was that no matter how hard I tried to avoid mistakes, I kept on making them. My greatest mistake was that I took many things for granted and made assumptions based on either stereotypes or how other researchers and academic commentators had experienced cross-cultural research. One of the false assumptions I made in the beginning of the research was that I idealized the structure and conduct of the BFRSs and the LFB but because of my initial negative disposition towards the HFC. Especially in the Hellenic case, I struggled to maintain the fine balance between objectivity and subjectivity, detachment and involvement, attributes which, according to Bruyn, make for a good participant observer (Bruyn in Filstead 1970: 306, 307). In the process of accessing the fire and rescue services and integrating in their routines, I learnt how to cope with the role of the participant observer. I realized that the degree to which the researcher integrates with the everyday surroundings of the organization-members depends on the researcher's own attributes, the participants' intention to allow the integration and the dynamics developed between the researcher and the participants. When I started to respect this balance, I began to avoid some of the mistakes I had previously made.

Gradually I realized that the way in which the organizations reacted to my approach expressed the rationale of their procedures, practices and routines. The degree of accessibility appeared tightly coupled with the extent of my integration into the everyday conduct of the organization-members. That is because the administration of the organization introduced me to the rest of the personnel in a specific way that set limitations as to how I could stage myself in when trying to integrate their routines.

My routine and choices showed me that, sometimes, spontaneous actions have a happier ending than a calculated approach. A calculated approach bears a set of expectations. So, what may seem as a well-thought-out plan may raise the hopes and expectations of the researcher. Yet, when it fails, the researcher experiences a disappointment that challenges his/her commitment to their project. However, a spontaneous act may favour both the researcher and the subject of the research as it allows a more relaxed approach. To paraphrase Robert Merton's "serendipity pattern" (in Filstead 1970: 284), the spontaneous may surprise the researcher with unexpected data that can enrich and validate the research process. The methodology I chose was flexible enough to enable me to improvise. Improvisation, I found, was not only a merit in emergency responses but also a significant advantage in methodological approaches. Improvising proved useful when I did not know

what to do next and, thus, broke grounds for innovation. Before I accepted to play volleyball with the EFRS-2 fire-fighters, the commander of the fire-station had asked me if I was interested in having a chat with him about how the fire-personnel conduct emergency operations. I only had time for the game or for the chat. If I had decided to chat with the commander, I would have missed the opportunity to witness that during the game, my team-members were trying to avoid passing the ball on to me unless it was absolutely necessary. I was invited to play, probably out of courtesy, but I was not trusted enough to be a part of the team. When we lost the game, they hardly addressed me. That game offered me a unique opportunity to discover how the subjects of the research dealt with the presence of the researcher. Rather surprisingly, serendipity helped define how I approached the findings of my research.

8. Structure of the thesis

The chapters that follow address the communication conduct among fire-fighters during emergency responses in Greece, Britain and Germany. These are preceded, in Chapter 1, by an examination of how fire-fighting personnel dealt with two emergencies of catastrophic proportions in the United States, where I have relied only on documentary evidence. The two emergencies: 9/11 and Hurricane Katrina, because of their severity, offer valuable transcript material and serve to throw light on the European situations. Ultimately, of course, my aim is to understand better the situation of the Hellenic Fire Corps for theoretical and practical purposes. Chapter 2 describes the five Hellenic episodes selected to indicate the communication practices of the Greek fire-fighters during those emergency responses. Chapters 3, 4 and 5 provide an analysis of the communication conduct among HFC organization-members on and off the incident-grounds. Chapter 3 focuses on the role of the incident commanders and on how their decisions affect the actions taken on-site. In chapter 4, I investigate how the rest of the participant actors interact during emergency responses and in chapter 5 I provide a brief overview of how information is managed within the command and control centre of the HFC and between the CCC and the operations' personnel. Chapter 6 and 7 discuss the routines and the communication practices of the various BFRSs investigated and the LFB, respectively. Finally, in the conclusion I interweave the empirical data with theory on organizations, and briefly recapitulate the main points made in the preceding chapters.

CHAPTER 1

CASE STUDIES FROM THE UNITED STATES

The 9/11 and the Katrina emergency responses comprise two dramatic crises of huge proportions (Kellner 2002). The extreme nature of these cases helps shed light on the problems that surface in emergency communication among first-responder organizations. Some of the communication problems identified in the 9/11 and the Katrina responses are similar to the Hellenic, the British and the German cases; others differ. As will become evident from the chapters that follow, these differences in the communication practices are due to the cultural differences of the organizations investigated (Grimshaw 1979). Comparing the 9/11 with the Hellenic, the British and the German cases, will enable our learning from one system and facilitate our effort to apply what we have learned to another (Dallmayr 2005; Parker and Stern 2005).

1.1. The 9/11 emergency response

However tragic, the World Trade Centre (WTC) terrorist attacks offered a unique opportunity to study the response of the New York Fire Department (FDNY), amongst other responder organizations, to such a large-scale crisis. On the 22nd of July 2004, the *Committee* commissioned by the US government to investigate the causes of the 9/11 crisis as well as the emergency response, published 41 recommendations in a *Report* that looked into the public sector's infrastructure weaknesses that had led to the loss of 2,823 people in the collapse of the WTC. The *9/11 Commission Report* was one of two reports to thoroughly examine the weaknesses of the fire department as well as the problematic nature of the cooperation between first-responder organizations. The other was the McKinsey and Company Report, based on research that was conducted at the FDNY request.

1.1.1. The 1993 response to the terrorist bombing of the WTC complex

The 9/11 bombing was the second attack on the WTC. The first took place in 1993, when six people were killed and more than 1,000 injured by a 1,500 pound bomb detonated on a parking garage ramp underneath the Twin Towers. The blast caused the Towers to lose power and communications capability. The generators shut down and the elevators stopped. The emergency lighting system failed and the stairwells filled with smoke. The 9-1-1 emergency centre was overwhelmed. The FDNY radio signals could not penetrate the steel and concrete floors of the buildings and all communications were conducted from one channel (Lipton 2004). The evacuation protocols failed because of variations every time a drill took place (Staff Statement No. 14 2004). These were the problems that the Port Authority, responsible for the complex's safety, and the FDNY had to encounter whilst responding to the emergency (Kean et al. 2004). [14]

A year later, the issue of the first-responder organizations communicating in the Towers was addressed. The Port Authority, responsible for the security of the WTC, decided to move the repeater (a device that enhances the radio signals) from their offices located in WTC5 to the lobby of each of the Twin Towers, so the FDNY could be wholly responsible for its operation (Port Authority Memorandum 2003). In 1996, an attempt was made to address the problem of the first-responder organizations cooperating on the incident-grounds. Mayor Rudolph Giuliani put together the Mayor's Office of Emergency Management (OEM) so as to improve the city's overall response, especially to major crises (OEM Biennial Report 2007). OEM assumed responsibility for the planning and conduct of exercises and drills involving multiple city agencies. One of its main tasks was to monitor the city's key communication channels and radio frequencies of the NYPD and the FDNY. Despite the objections that some of the city officials raised with regard to the risks entailed in placing the HQ of such an important organization somewhere in the WTC complex the headquarters of OEM were located in the WTC7 (Kean et al. 2004).

In July 2001 the Mayor's Office updated the "Direction and Control of Emergencies in the city of New York" so as "to eliminate conflict amongst emergency organization in areas of

[14] See also 'First strike: Global terror in America', 26/02/2008.

overlapping responsibilities" (Kean et al. 2004: 284-285). This attempt indicated a pre-existing problematic relationship among actors, such as first-responders, whose cooperation is essential in mitigating a crisis (Janis and Mann 1977; Thomas 1992; Tidwell 2001). In the same directive, a typology of crises was offered in order to indicate the organization that would serve as the incident commander in each case. Despite this directive, "the NYPD and the FDNY each considered itself operationally autonomous. As of September 11, they were not prepared to comprehensively coordinate their efforts in responding to a major incident. The OEM had not overcome this problem" (Kean et al. 2004: 285).

1.1.2. The 9/11 response to the attacks of the WTC

On the 11th of September, from 08:46, when the first plane hit the North Tower, until 10:29, when the Tower collapsed, the FDNY encountered a series of problems both on a technical and organizational level that ultimately contributed to the death of 343 fire-fighters, amongst the 2,823 fatalities, during the collapse of the WTC1 and WTC2.[15]

Radio frequencies were scarce and congested,[16] emergency lighting systems were deactivated and the 9-1-1 emergency centre was congested by the number of incoming calls mostly from civilians trapped in the Twin Towers. The incapacity to facilitate all these calls was further hampered by the lack of existing protocols as to how to advise the civilians who were trapped in the WTC. According to standard operating procedures, the 9-1-1 operators receive calls and depending on their context they forward the information to the FDNY or the NYPD dispatchers. Due to the unprecedented nature of the event, the 9-1-1 operators did not know how to assess the incoming information, who to contact about that information and which channels to use in order to disseminate the information (Kendra and Wachtendorf 2003; Lewis 2009). The advice the majority of the 9-1-1 operators provided to the civilians was to stay low, to remain at their place and to wait for the emergency responders. Some 9-1-1 operators, however, deviated from the outdated, existing protocols, and advised civilians to evacuate the WTC. The civilians who were unable to reach 9-1-1 evacuated the compromised complex. Others experienced the

[15] See also the *Final Report on the Collapse of World Trade Centre Building* 2008.
[16] 'Heroes or victims? The role the fire-fighters really played.' The Guardian, 18/02/2008.

indecisiveness of the 9-1-1 operators and their reluctance to assume responsibility for assessing the significance of a piece of information and promptly forwarding it to the appropriate units of responders:

> I told them when they answered the phone where I was that I had passed somebody on the 44th floor injured –they need to get a medic and a stretcher to this floor and described the situation in brief and the person then asked for my phone number or something and they said they put me on hold. "You gotta talk to one of my supervisors" and suddenly I was on hold. And so I waited a considerable amount of time. Somebody else came back on the phone, I repeated the story. And then, it happened again. I was on hold a second time and needed to repeat the story a third time. But I told the third person that I am only telling you once. I am getting out of the building, here are the details, write it down and do what you should do. (Kean et al. 2004: 295)

This was the testimony of one of the civilians that managed to evacuate one of the Towers that morning. He had called 9-1-1 in order to give a piece of information and had to repeat the same information three times. It is evident that 9-1-1 operators were unable to assess the importance of the incoming information since they seemed to be lacking the basis of such an assessment. Moreover, they were not told that roof top rescues had been ruled out and kept on advising civilians who were above the impact floors to remain in their places (Kean et al. 2004).

The function of the emergency systems, such as the emergency lighting, was partially affected by the structural damages inflicted to the constructions. After the South Tower was hit at 09:03, the stairwells had gone dark and the evacuation of the civilians trapped in the building was delayed. Furthermore, the repeaters installed in the lobby of each of the Towers to secure communications capability in the high rise, concrete and steel environment of the contractions seemed to be inoperable at the time (Kean et al 2004; *McKinsey Report* 2002).

There is an interesting difference here between the *9/11 Commission Report* and the *McKinsey Report*, involving a shifting of responsibility from the FDNY – responsible for the maintenance of the repeater and the training of the personnel – to the employees who operated the repeater on the day. The former report states that the repeater in the North

Tower worked partially. It facilitated the transmissions from the portable radios but in order to be fully operable and support all frequencies used by the organizations involved in the response, another button was needed to be pressed by the fire and rescue personnel. This omission indicated that the fire-fighting personnel were either lacking the training to operate essential equipment or neglected to check the repeater due to stress (Kean et al. 2004). The report also emphasized that even the repeater in the South Tower that was functioning properly was eventually shut down because the majority of the crews operating in the building were not informed that they had to use channel 7 of the repeater in order to be able to communicate (Kean et al. 2004). However, according to the *McKinsey Report* (2002), on the morning of the 9/11, the repeaters were not functioning.

The major difference between the two reports on this question underlines the possibility that the fire-fighting personnel did not know how to operate essential equipment that would secure communications capability and continuity within a high risk environment. This inoperability led to further utilisation of a tactical channel that resulted to its being congested. Due to this congestion, the communication between the chief from the staging area located initially in the lobby of the North Tower and the units that were operating in the building became fragmented and therefore problematic: some of the operations' units acknowledged and returned the signals, others acknowledged but were unable to return, others transmitted but did not acknowledge and the rest just experienced a constant noise due to radio traffic congestion.

This congestion along with the lack of a Mobile Command Unit (MCU) that would receive all information through the various frequencies, assess and disseminate them resulted in an unreliable emergency communication conduct. For instance, the information that 100 people were trapped on the 105 floor of the North Tower never reached the personnel in the lobby. Although a command and control van was placed on the scene, it was not the primary one, which on that day was in the garage for repairs and the backup was lacking the capability of supporting such a major incident (Kean et al. 2004).

That morning the overall command of the fire and rescue operations was assigned to the chief fire-officer (CFO) of the FDNY. Tactical decisions were made by the commanders in the lobby of each of the Twin Towers. The highest-ranking officer was responsible for

communicating with the CFO. However, the command structure was unprepared to manage such a major crisis, especially after the CFO was killed when the WTC1 collapsed at 10:29. The high-ranking officers were assessing a critical situation with little or no information. A higher-ranking fire-officer claimed that "people watching TV certainly had more knowledge of what was happening a 100 floors above us than we did in the lobby" (Kean et al. 2004: 298). The FDNY incident commanders did not know the impact floors; the state of the stairwells; if there were adequate water supplies on the impact floors; what the behaviour of the fire due to the vast amount of jet-fuels was; what the outside view of the impact zone was. Seeing the impact zone from outside the compromised buildings, could have shaped the perception of the incident commanders, who were the actual decision makers, in such a way as to evacuate the Twin Towers immediately after the impact. That never happened. On the contrary, during the de-briefing held by the 9/11 Commission, there was confusion as to the time the evacuation processes were initiated (Kean et al. 2004).

Information was not only poorly disseminated but its content was also distorted. At least one call was placed by a civilian to the 9-1-1 emergency centre at 09:37, almost 22 minutes before the South Tower collapsed. The civilian told the 9-1-1 operator that the 90-something floor was collapsing. Fifteen minutes later, the operator forwarded that information as "the 106 floor is crumbling" (Kean et al. 2004: 304). A crucial piece of information that an upper floor was collapsing was processed 15 minutes after it was logged in the 9-1-1 centre, and misinterpreted. That is a very long period considering first the fact that the WTC complex had already been hit twice and second, that the existing technical communication difficulties inevitably slowed down the process of forwarding the information to the incident commanders. Moreover, information was forwarded to the operations' units via incorrect channels: it was transmitted through the radio frequencies used in the precincts near the Twin Towers and the Special Operations Division but not via the congested citywide channel-1, which was the channel the incident commanders were using. Nevertheless, this was not the only time that information was forwarded via incorrect radio channels. As soon as the South Tower collapsed, an FDNY boat from the Manhattan River communicated this information immediately using the Manhattan dispatch channel. But all command posts, i.e. the command post and the communications van, had already been abandoned. Hence no one seemed to be listening at the other end of the radio.

The misuse of the radio frequencies revealed an organizational problem stemming from lack of training and the absence of standard operating procedures. Some of the higher-ranking officers identified the problem and temporarily tried to transmit any significant information via more than one channel in order to get through to as many first-responders as possible. At least one of the incident commanders ordered the evacuation instructions via more than one channel, and at least three fire-fighters heard them as well as the information about the imminent collapse. The ones that did not hear the evacuation order were those whose radios were not functioning properly due to the height of the Towers; the ones that heard were listening on the tactical channel which was congested; the off-duty personnel that were not carrying radios and the re-dispatched to the South Tower fire-fighters, who were listening on another frequency (Kean et al. 2004; *McKinsey Report* 2002).

Two minutes before the South Tower collapsed, an EMS paramedic approached the CFO and told him that an engineer in front of the WTC7 remarked that the Twin Towers were in imminent danger of collapse (Kean et al. 2004: 302). But according to the *McKinsey Report* (2002: 9), "some potentially important information on the structural integrity of the building never reached the incident commander." This random information reached at least one of the incident commanders. At least one other incident commander falsely assumed that the North Tower was unlikely to collapse because the plane did not hit the corner of the building as had happened with the South Tower (Kean et al. 2004). None of the FDNY higher-ranking officers anticipated the entire collapse of the WTC towers. Deprived of an overall image of the incident, the commanding officers failed to re-group and re-deploy their resources on the incident-grounds.

Throughout the 9/11 emergency response the command structure remained unclear. This fact resulted in the mismanagement of personnel and resources. At 08:49, in the intact South Tower, in a communication with his North Tower counterpart the deputy fire safety director said that he would not order an evacuation procedure until he heard "from the boss, from the fire department or somebody" (Kean et al. 2004: 287). The order to evacuate the South Tower was issued at 08:57. This lack of initiative may have jeopardized a number of lives that morning. In crises, initiatives are essential. The existing procedures cannot always foresee all aspects of an emerging crisis and provide instructions as to how emergency responders should react (*FDNY Operational Procedures* 1999). The diversity

of crises as well as the different types of organizations responding to them cannot always be bridged by a superfluous number of protocols nor can professionals retain and recall a vast amount of information during their responding to an overwhelming situation.

On that morning, the lack of commanding officers to instruct the operations' units on-site contributed to the death of a number of fire-fighters. Just before the collapse of the North Tower, a number of fire-fighters found themselves in the lobby of the building. They had received no instructions. Some of their colleagues who had heard about the collapse of the South Tower informed them about the evacuation orders issued. However, in the process of evacuating the Tower, they lost their lives. Others were killed when, convinced by some of their colleagues, they decided to re-ascend in order to locate fire-fighting personnel missing in action. At least one fire-fighter heard the order on the radio and responded "we are not fucking coming out" (Kean et al. 2004).

Overall, the management of the available personnel and resources proved to be rather problematic: in those 17 minutes, after the North Tower was hit and before the South was attacked, 1,000 first-responders were deployed. The question of citywide coverage was not raised until after the second Tower was hit. After the second attack, the mobilization escalated. More units were requested and the FDNY dispatchers directed the dispatched units to report to the staging area which some units failed to do and went directly to the incident-grounds. As a result, those units were lacking the essential information to carry out their tasks.

After the South Tower was hit, the mobilization increased. More units proceeded on-site when fewer were requested (Kean et al. 2004: 297). Self-dispatched units proceeded on the rescue-grounds to take part in *heroic deeds* (Schulman 1996). Since the attacks took place during a tour-change, the fire-fighters that were supposed to be off-duty joined the ones on duty. Off-duty officers were appearing on the rescue-grounds and so did fire-fighters who lacked a predetermined role. They were responding to the South Tower. Some went to the North Tower because they couldn't distinguish between WTC1 and 2. The Brooklyn units, dispatched to the South Tower at 09:37, showed up at the Marriot Hotel. Both these cases once more emphasized the lack of training. Others couldn't find the staging area for the South Tower. In addition, jumpers and debris caused some units not to reach the tower

from the main entrance but to find alternative entrances. Moreover, some fire-fighters separated from others due to the heavy personal equipment and fatigue. Overall, the FDNY couldn't coordinate and account for its personnel.

Inter-organizational coordination proved rather problematic. The first-responder organizations involved in the rescue operations were the OEM, the FDNY, the NYPD, the PAPD as well as the 9-1-1 personnel. After the first Tower was hit, the OEM contacted FEMA to ask for five federal urban search and rescue teams. OEM officials did not assume the command of the emergency response, contrary to procedures. Moreover, 9-1-1 calls were forwarded to the NYPD instead of the FDNY. So the FDNY, acting as the incident commander, did not receive essential information with regard to organizing, launching and coordinating the response. The responder organizations did not share information due to technical reasons or due to lack of a common practice designed and developed prior to the emergency, for example in the form of joint training (Staff Statement 13 2004).

During the response at the Pentagon, on the same day, the first-responders' organisations intervention was well coordinated. The Incident Command System operated effectively, there was a unified command and since they had been having joint exercises and prior experience working together the professional relationship between the first-responders was based on trust. Moreover, the fact that they did not have to operate 100 ft above ground contributed to the smooth development of the operations (Wood and King 2002).

1.2. 9/11 emergency communication: The NORAD recordings

The North American Aerospace Defence Command (NORAD) is a military organization responsible for protecting the North American airspace; the Northeast Air Defence Sector (NEADS) is the regional headquarters for the NORAD. The short section that follows shows how the U.S. Air Force responded on 9/11. Michael Bronner reconstructed the chaotic military history of that day based on the 30 hours of never-before-released tapes from the control room of NORAD's Northeast headquarters, in an article published in the Vanity Fair magazine (August 2006). Here, I analyze some of the conversations that took

place that day in order to establish common patterns between the following communication conduct and the communicative interactions examined throughout the rest of the thesis.

On the morning of the 11th of September 2001, at 8:54 a.m., controllers at Indianapolis Centre lost radar contact with American 77, flying from Washington Dulles to LAX, and assumed the plane had crashed because they weren't aware of the attack in New York. Even though they soon realized that this was another hijacking and sent warnings up the Federal Aviation Administration (F.A.A.) chain, no one called the military; it was only by chance that NEADS got the information when one of their personnel contacted the Washington Centre. The following conversation took place between the NORAD personnel and the Boston Centre, which is the civilian air-traffic-Control facility that manages high-flying airliners in the wider area of New York City (Bronner 2006):

1	**NORAD**	***It's the inbound to J.F.K.?***
2	**BOSTON CENTRE**	***We - we don't know.***
3	**NORAD**	***You don't know where he is at all?***
4	**BOSTON CENTRE**	***He's being hijacked. The pilot's having a hard time talking to the… I mean, we don't know. We don't know where he's goin' […] We have no idea where he's goin' or what his intentions are.***
5	**NORAD**	***If you could please give us a call and let us know - you know any information, that'd be great.***
6	**BOSTON CENTER**	***Okay. Right now, I guess we're trying to work on - I guess there's been some threats in the cockpit. The pilot…***
7	**NORAD**	***There's been what?! I'm sorry.***
8	**UNIDENTIFIED VOICE**	***Threat to the […] ?***
9	**BOSTON CENTER**	***We'll call you right back as soon as we know more info.***

The failing of the telecommunications infrastructure was hardly the only or the most significant reason why essential information with regard to the 9/11 or the hurricane Katrina emergencies was poorly disseminated (Argenti 2002). The NORAD recordings indicate that the nature of the communication conduct among organizations was a far more significant factor in mismanaging the emergency response. Inconsistent narrations (4, 6), incoherent information (2, 4, 6, 9) randomly disseminated (8) and acquired by those interested not purposefully but due to a pattern of serendipity, the lack of verification with regard to the content of pertinent information (8), prolonged pauses (4, 6), overlapping (8,

9) and superfluous repetitions are a cross-cultural characteristic in the communication conduct among organization-members participating in emergency responses, as we shall see in the chapters to follow.

Confusion is the result of the "unanticipated" character of an emergency and the cause of incomprehensible narrations, inconsistent and unverified information:

Example A:

10	**NORAD1**	***Is this explosion part of that that we're lookin' at now on TV?***
11	**NORAD2**	***Yes.***
12	**NORAD1**	***Jesus… And there's a possible second hijack also, a United Airlines...***
13	**NORAD2**	***Two planes?***
14	**NORAD1**	***Get the fuck out…***
15	**NORAD2**	***I think this is a damn input,*** [17] ***to be honest.***

Example B:

16	**NORAD1**	***What?***
17	**NORAD2**	***Whoa!***
18	**NORAD1**	***What was that?***
19	**NORAD2**	***Is that real-world?***
20	**NORAD1**	***Real-world hijack.***
21	**NORAD2**	***Cool!***

Example C:

22	**NORAD**	***Is this real-world or exercise?***
23	**BOSTON CENTER**	***No, this is not an exercise, not a test.***

The unexpected is difficult to penetrate the daily routines and practices of the organization-members (12, 14, 15, 20, 21). So, prolonging communicative interactions by reiterating trivial information operates as a coping mechanism (16-21). Bronner (2006) adds that the NORAD employee's question: "is this real-world or exercise?" (22) is heard continuously and nearly verbatim, during the crisis, as more employees were being briefed about the incident: "Powell, like almost everyone in the room, first assumes the phone call is from

[17] *Input* is a simulated exercise.

the simulations team on hand to send "inputs" - simulated scenarios - into play for the day's training exercise" (Bronner 2006).

Difficulty in adapting to exceptional circumstances increases depending on the nature of the emergency situation. The element of surprise, as a manifestation of this difficulty overwhelms and disorients the receivers of unanticipated information. The NORAD tapes provided the following communicative interaction where a NORAD employee places a call to civilian controllers at the New York Centre:

24	**NORAD**	***Yes, ma'am. Did you just hear the information regarding the World Trade Centre?***
25	**NEW YORK CENTER**	***No.***
26	**NORAD**	***Being hit by an aircraft?***
27	**NEW YORK CENTER**	***I'm sorry?!***
28	**NORAD**	***Being hit by an aircraft.***
29	**NEW YORK CENTER**	***You're kidding.***
30	**NORAD**	***It's on the world news.***

Information arises as an indispensable asset, an input that defines organizational performance. From the phase of receiving and assessing information (24-30) to the stage where appropriate actions are taken in order to mitigate an emergency, organization conduct reflects the preparedness of organization-members to manage the situation (Perry 2004). According to the *NORAD tapes*, either military personnel or civilian employees were unable to accept the unanticipated parameters of the crisis and were, thus, indecisive as to how assess and diffuse the information to other co-responder organizations.

1.3. The hurricane Katrina response

Almost four years after the 9/11 event, similar failures occurred during the emergency responses launched in the southern States affected by hurricane Katrina. Over 1,300 people were killed and more than 6,500 were ultimately rescued in Mississippi, Louisiana, and Alabama over an area of 93,000 square miles, after the catastrophic passage of hurricane Katrina in August 2005. Approximately 80% of the city of New Orleans was flooded under

six to 20 feet of water (Massey 2007). In the Gulf of Mexico, Hurricane Katrina "battered the offshore energy infrastructure and forced the evacuation of more than 75% of the Gulf's 819 manned oil platforms" (Townsend 2006: 1-2). Two days before landfall, U.S. energy companies estimated that the approaching storm had already reduced the oil production in the Gulf of Mexico by more than a third (Townsend 2006).

Hurricane Katrina has been considered as the most destructive natural disaster in the history of the USA (Knabb et al. 2005) and its damages exceeded those of any other major disasters, such as the Chicago fire in 1871, the San Francisco Earthquake and fire of 1906,[18] and Hurricane Andrew in 1992.[19] Its impact necessitated one of the largest search and rescue operations in U.S. history, hindered nevertheless by the fact that communications were largely disrupted for a prolonged period of time. Despite the efforts made, the response to the Hurricane did not fulfil the standards of a "coordinated effort that had been envisioned by President Bush when he ordered the creation of a National Response Plan in February 2003" (Townsend 2006: 1-2).

Almost 2.000 police, fire and emergency medical service personnel participated in the rescue operations that took place in the impact zone. These professionals encountered a series of problems that contributed to hindering the coordinated effort (Guion et al. 2007). First, they inevitably encountered an intra-organizational crisis linked to availability of resources and command structure.[20] Due to the hurricane, a number of State and local public safety agencies suffered extensive damage to their facilities and equipment. Stations that suffered "total destruction" had to be shut down. Some emergency personnel did not report to work. This disruption in the organizational consistency led Warren J. Riley, Superintendent of the New Orleans Police Department, to testify before Congress that "Much has been said about officers abandoning their position during the storm, and it is true that about 147 officers abandoned their positions. However, they are no longer a part of the New Orleans Police Department" (Townsend 2006: 37). Responders such as police or fire-fighting personnel abandoning their posts results in mismanagement. There are very few cases reported where emergencies were effectively mitigated when civil servants returned to their posts after a crisis had occurred. One such case is the 1995 devastating

[18] *Casualties and damage after the 1906 Earthquake*, http://quake.wr.usgs.gov/info/1906/casualties.html, accessed: 10/02/2007.
[19] *Hurricane History*, http://www.nhc.noaa.gov/HAW2/english/history.shtml, accessed: 08/12/2005.
[20] www.usuhs.mil/csts, accessed: 19/02/2007.

earthquake of Combe in Japan where the government employees and the first-responders reported immediately to their services. Otherwise, the recovery operations would have been widely set back (Koketsu et al. 1998).

Moreover, disruption in communications affected the leadership of the operations: the Mayor of New Orleans was neither able to effectively coordinate the local efforts nor to guide the State and Federal support for two days following the storm. That is because his Office was unable to establish reliable communications with anyone outside the hotel for nearly forty-eight hours. In addition, the intra-organizational crisis was burdened with breaches in safety conditions. Emergency responders had to operate in a hazardous environment involving extreme heat, chemicals, contaminated mud, downed power lines, and standing water. They repeatedly exposed themselves to floodwater, chemicals, bacteria, and debris. The storm's surge flooded three Superfund toxic waste sites in the New Orleans area, and destroyed or compromised at least 170 drinking water facilities and forty-seven wastewater treatment works along the Gulf Coast.[21] One of the Committee's recommendations on this issue was that the "Department of Homeland Security, in coordination with the Environmental Protection Agency, should oversee efforts to improve the Federal government's capability to quickly gather environmental data and to provide the public and emergency responders the most accurate information available, to determine whether it is safe to operate in a disaster environment or to return after evacuation".[22]

Second, first-responders encountered a technical crisis that hindered the effectiveness of the rescue operations via the coordination of available resources. The impact of hurricane Katrina incapacitated the emergency communications system. The 9-1-1 emergency centre telecommunications network was compromised and there were no contingency backup systems in place (Victory 2006: 23). The rescuers were forced to communicate in a single channel mode, radio-to-radio, utilizing only three mutual-aid frequencies. Some mutual-aid channels "required each speaker to wait his or her turn before speaking, sometimes up to twenty minutes" (Townsend 2006). Thus, too many responders were trying to use these frequencies which led to congestion. The State Senate's homeland security committee summed up the situation in Louisiana by stating, "People could not communicate. It got to the point that people were literally writing messages on paper, putting them in bottles and

[21] See 'Storm-Ravaged Mississippi', 07/09/2005.
[22] www.fcc.gov/eb/hkip/HKIPCharter.pdf, accessed: 09/01/2006.

dropping them from helicopters to other people on the ground" (Victory 2006). In addition, communications between the military and first-responders also suffered from lack of interoperability. In some cases, the military was reduced to using human runners to physically carry messages between deployed units and first-responders. In another case, a military helicopter had to drop a message in a bottle to warn first-responders about a dangerous gas leak.

In essence, communications after the storm revealed inadequate planning. Both the primary emergency communication system and the redundant systems – when available and potentially operable – were either destroyed or compromised by the hurricane. In addition there was a lack of pre-positioned back-up equipment and coordination. The problem of interoperability of public safety telecommunications systems operating in different frequencies and with different technical standards was encountered. In retrospect, communication experts suggested that there were alternative communication modes that could have been used by the first-responders or the use of technologies that could have helped to restore emergency communications. Nevertheless, the lack of knowledge and training rendered the alternatives useless. What was eventually suggested by the reports was that the FCC should take several steps to develop spectrum sharing among federal, state and local agencies for emergency response purposes.

Third, an inter-organizational crisis emerged. This crisis rested on the fact that too many federal, state or local emergency responder organizations in the impact zone both from neighbouring and distant states could not coordinate their operations due to the lack of previous experience of working with different organizations. A command and control structure was not established. Local emergency response officials found it difficult or impossible to establish functioning Incident Command structures. Members of the Hammond (Louisiana) Fire Department reported receiving "a lot of 'I don't knows' from [local] government officials" (Townsend 2006); another Louisiana fire-fighter stated that "the command structure broke down, we were literally left to our own devices". Moreover, ineffective communications between FEMA and other federal departments and agencies prevented available federal resources from being effectively used for response operations. The United States Department of Agriculture (USDA) observed that its personnel "had difficulty in getting FEMA to take advantage of the resources available to them because of

the unfamiliarity of some FEMA employees with USDA programs" (Townsend 2006: 531).

1.4. Conclusion: Lessons from the 9/11 and the Katrina

Fire-fighting organizations are one of the first agencies to respond to life threatening situations such as man made and natural disasters, the *last best hope* (Kean et al. 2004) for society. Their principal objective is to protect life and property when a disruption in the familiar patterns of everyday life occurs. Hence, they should plan for that eventuality with a firm commitment to preparedness so as to mitigate disasters (Waugh 2000). In spite of the key roles of first-responder organizations in addressing major disasters, the precise process of emergency management and patterns of communications between first-responder organizations did not attract much examination until the events of September 11, 2001. Instead, fire drills, evacuation planning, crowd control, and communications testing were organized and implemented reactively, in response to an actual event (Kean et al. 2005).[23]

The 9/11 terrorist attacks sparked a wide discussion amongst fire services around Europe. They came to realize that they were ill-prepared organizationally to cope with such large-scale disasters. The problems encountered by the FDNY are, in reality, every fire services' problems. From the investigation conducted by them they identified six main problems as stated hereunder. Insufficient technological support in communications was identified as the primary constraint in the 9/11 and the Katrina response (Kean et al. 2004; Townsend 2006). During the Katrina response, the radio frequencies were either so congested or scarce that responders were force to find alternative ways to communicate, such as exchanging messages in bottles. The second problem identified focused on the disruption in the process of disseminating information. The report highlighted the fact that, when the South Tower collapsed, very few people in the North Tower were aware of the incident.

[23] 'A litany of Failure: White House support is needed to rescue Floundering reforms.' Financial Times, 06/12/2005.

Thirdly, inter-organizational communication totally disintegrated during the response to this crisis. The special rescue units of the NYPD in the North Tower were aware of the collapse of the South Tower and the evacuation order issued for the first responders, but the fire-fighters later on claimed that the "cops" did not inform them on their way down from the Tower, or according to the police officers, when they were repeating the evacuation order the fire-fighters' response to them, was: "we are not taking orders from cops" (Kean et al. 2004). The absence of unified command was identified as a fourth problem. This led to uncoordinated actions of the first responders involved in the situation. Each first responder organization was operating autonomously despite the fact that there was an agency which was assigned to coordinate their response, the OEM organized in 1996, after the 1993 bombing of the Twin Towers. During the Katrina response, the National Incident Management System (NIMS) that establishes standardized incident management protocols and procedures that all responders – federal, state, and local – should use to conduct their communication and coordinate their actions did not establish command and control structures, as expected, presumably because it had been adopted in March 2004 and professionals had not been trained as to how to operate according to the system's parameters (Townsend 2006: 13).

The fifth problematic area was the insubordination of units due to panic. It was later realised that, contrary to the orders they have been given to hold their positions, some units were self-dispatched on the rescue-grounds. Finally, misinformation coming from the emergency services' dispatch centres contributed towards the mismanagement of the entire situation, which in some cases led civilians to their death. The 9/11 operators were simply giving them the wrong advice to stay where they were because the responders would help them.

All these major constraints in an effective response to the situation have also been identified as such in European crises such as the ones we address in the following chapters. Looking through the perspective of these problematic areas identified by the *9/11 Commission Report*, the *Katrina Report* and the *NORAD recordings*, we will now explore the extent to which they are evident in the HFC.

CHAPTER 2

THE HELLENIC FIRE CORPS AND THE EPISODES INVESTIGATED

This chapter examines how HFC employees who are involved in responding to emergencies communicate amongst themselves and with other first-responder organizations. Five episodes dating from 2005 – 2006 are examined, compared and contrasted in order to establish the communication patterns emerging during the process of responding to emergencies.

2.1. The HFC actors

Mobilization is the process whereby personnel who are employed in the command and control centre (CCC/control room) dispatch operations' units from their fire-stations to the incident-grounds as soon as the emergency is reported to the control room. The main actors involved in responding to emergencies are the personnel employed in the CCC and the operations' units. The CCC comprises operators, dispatchers and officers. Control operators are usually fire-fighters. They answer the 1-9-9 emergency calls. Civilians, personnel employed in the control rooms of other first-responder organizations, such as the police or the ambulance service, or HFC employees from local fire-stations, are usually the ones to contact the emergency centre of the HFC in order to report an emergency in progress. As soon as control operators receive the information regarding an emergency, they either forward it to the on-duty control officers or to the control dispatchers, or to both. Then, they re-contact the source of information to make sure that the call is not a hoax or that the information provided was accurate (Grimshaw 1980).[24]

Control operators and dispatchers are two functionally distinct posts. They operate in two separate rooms in the CCC. During an extensive mobilization and when their assistance is required, operators may often assume the role of dispatchers. Dispatchers assist as

[24] "199-Regulation Code", no 34542 Φ. 109.1/ Government Gazette B 37/1996.

operators only very rarely. On the one hand, there are usually fewer dispatchers than operators and the number of tasks they undertake is overwhelming. On the other hand, dispatchers are usually slightly senior than operators and they are reluctant to undertake tasks reserved for lower-ranking employees.[25]

Control dispatchers are usually sub-officers occupied with assessing this information and with instigating the mobilization process. In order to assess the information, they rely on their experience. There are very few procedural guidelines entitled "The Memorandums of Action"[26] that suggest which actions have priority over others depending on the type of emergency the HFC encounters. For example, in case of a road traffic collision (RTC) that involves a tanker, the dispatchers should immediately mobilize four fire-engines and notify the on-duty officer responsible for the district where the collision occurs to proceed on-scene. However, when a fire erupts in the basement of an apartment building, the dispatchers should mobilize four fire-engines, the special unit with the respiratory devices, the rescue unit and then the on-duty fire-officer of the district. Nevertheless, there are no standard operating procedures (SOP) that indicate which type or number of appliances to dispatch depending on the type of emergency. For run-of-the-mill incidents, control dispatchers initiate the mobilization process by calling the operators of the fire-stations that have jurisdiction over the affected area or those that are nearest to the incident-grounds. The first stand-by unit – composed of two appliances – is the one to be dispatched. Control dispatchers also pass on information to the station operator such as the location and type of emergency. After dealing with this initial dispatching of appliances, they report to the on-duty control officers.

The mobilization process changes when the emergency appears more serious than run-of-the-mill incidents. In such cases, dispatchers instigate the mobilization process after they negotiate with the control officers. Control officers assess the information and direct the dispatchers as to what number and type of appliances to mobilize. Control officers forward information concerning the incident and the initial mobilization to the commander and the deputy commander of the CCC. Depending on the nature of the emergency, the CCC commander decides ad hoc who to contact from the highest-ranking officers. He also

[25] Fieldnotes March - May 2005.
[26] Unofficial procedures for responding to emergencies introduced in May 2004 (Fieldnotes, March 2004).

indicates whether he or one of the on-duty control officers should undertake the task of being in touch with the highest-ranking officers.

Control employees receive, assess, and then disseminate the information to the operations' units. When operations' units on the incident-grounds cannot establish direct communication with one another, usually due to technical reasons, control employees also serve as intermediaries between them. Moreover, control employees keep track of the resources deployed on the incident-grounds. The operations' units consist of the fire-fighters and fire-officers who respond to the emergency. Fire-officers are those who assess the risk entailed in the emergency, decide on the response and coordinate the units on the incident-scene. Hence, in the HFC, the mobilization process is conducted in two directions: mobilizing the appliances and notifying the highest-ranking officers. High-ranking officers from the command structure plan the response and coordinate the resources on the fire or rescue-scenes:

Table 1

Backstage communicative interactions: How information is disseminated			
Information	Control operators	Control dispatchers	Station operators
		Control officers	Command structure: - Chief fire-officer - Control commander and deputy commander - Senior operations fire-officers

To follow a Goffmanesque analogy, this channel signifies the *backstage* (Goffman 1990) communicative interactions between the organization-members as opposed to the *frontstage* communications conducted via radio. The difference between these two channels of communication is that via telephone, a one-to-one interaction takes place. Via radio, the communication actors acquire an audience. The presence of an audience changes the circumstances of the communication conduct. In order to act before an audience, performers need to rehearse. Rehearsal requires commitment as well as constant and continuous training. The on-stage performance follows a set of rules. There is a script and a cast. The performance is under scrutiny and as such it becomes the object of potential criticism from the audience that is the HFC employees directly or indirectly involved in the action. In this case, a one-to-one interaction is less demanding and may be less formal.

Despite the fact that there are rules, they may be circumvented depending on the two communicators involved. Communication between operations' units and control personnel should be conducted via radio. The content of such communication becomes potentially accessible to all those actors involved in the emergency response so as to be aware of the actions taken on the incident-grounds.

2.2. Analyzing the material

The reconstruction of the events that took place was based on the fragmented recorded conversations that I retrieved from the audio archive of the HFC, the interviews that I conducted with the actors in the emergency responses, the formal reports submitted by the control personnel and my own experience as a participant observer in the organizational conducts. The *dialogic analysis* (Goffman 1981) is intended to uncover the strengths and weaknesses of the HFC. Hopefully, this will lead to an effort to combine the most effective structural elements to create a model of *good practice*.

Episode A: The train collision

On the 8th of March 2006, a few minutes after eleven o'clock in the evening, a commuter train carrying 130 passengers collided with a freight train parked in the Med[27] train station. The first two coaches of the commuter train derailed resulting in the death of one of the two engine-drivers and the injury of ten passengers. The HFC responded to the incident by dispatching eight fire-engines and four rescue units within the first 30 minutes of the initial report of the incident to the CCC of the HFC. The HFC assisted almost 30 passengers to evacuate the derailed coaches.

Prior to the incident, the recorded communications reveal that control employees were involved in conversing with family members and friends. The audio archive does not indicate who notified the control personnel about the train collision. It shows that a few

[27] *Med* is the name of the location.

minutes after 23:00, control dispatchers mobilized two rescue units to proceed on the collision-scene followed by two fire-engines and Kronos-15, the code name for the on-duty operations fire-officer in that district. On their way to the rescue-grounds, the majority of the operations' crews of the appliances contacted the control room via telephone to ask for directions.

1	**Ops' crew**	***Pal, from X rescue unit. Tell us where exactly is it? In which station?***
2	**Dispatcher**	***At the station at Med.***
3	**Ops' crew**	***Med?***
4	**Dispatcher**	***Yes.***
5	**Ops' crew**	***Ah! Ok. […prolonged pause]***
6	**Dispatcher**	***Do you want me to give you directions via radio?***
7	**Ops' crew**	***Yea…***
8	**Dispatcher**	***Ok.***

Before hanging up the phone, one of the crew-members commented:

9	**FF**	***Do we know how to get there?***

In their effort to mobilize all the appliances necessary for the rescue operations, a dispatcher contacted a fire-fighter in one of the fire-stations located near the collision-scene:

10	**D**	***The centre.***
11	**FF**	***Good evening. It's Papas.***
12	**D**	***Who?***
13	**FF**	***Papas from the x [meaning: the x Athenian fire station], the one who is responsible for the cranes.***
14	**D**	***Go on my friend.***

15	**FF**	***Which crane do you need?***
16	**D**	***Me, personally, none. Your commander has asked for it. I don't know. Which one is ready to go?***
17	**FF**	***You tell me. They are both ready to leave.***
18	**D**	***Wait a moment.***
19	**FF**	***Do you hear me? I'll call the "big guy" [meaning: their commander].***
20	**D**	***[Speaking to the control officer] Superintendent! Superintendent! We are taking out the big crane!?! [To the operator] the big one.***
21	**FF**	***Ok. Bye.***

Dispatchers made a few phone calls to the station operators in order to make sure that the rescue-equipment of the appliances was indeed in place and operable. A number of conversations with the press office followed:

22	**PO**	***How many appliances are on their way?***
23	**D**	***Mmmmm! The x, y, z, a, b, c… [continues numerating]***
24	**PO**	***The total?***
25	**D**	***Two plus two plus [continues adding]. Eight.***
26	**PO**	***Eight appliances, right.***
27	**D**	***Right.***
28	**PO**	***Thanks.***
29	**D**	***Bye.***

Between control officers and dispatchers, instructions as to how to deal with operations' personnel were given:

30	**CO**	***Call the deputy chief on the radio…***

31	**D**	***Yes, superintendent?!***
32	**CO**	***And instruct him how to go to … wherever*** **[the name of the location appears to slip his mind].**
33	**D**	***Where is the deputy chief?***
34	**CO**	***He called and said he is on his way to…***
35	**D**	***What am I going to tell him? "Where are you exactly"…?***
36	**CO**	***No, no, no. Call his driver, pal, and…***
37	**D**	***Yes…***
38	**CO**	***Facilitate… in order to facilitate you… to help you approach the area of the incident. The incident is on Corinth's street…***
39	**D**	***Yes…***
40	**CO**	***Tell him…***
41	**D**	***Yes…***
42	**CO**	***What is your direction so that we can facilitate you?***
43	**D**	***Ok, bye.***

In one of the follow-up conversations with the press office, a dispatcher provided information about the man-power on the collision-scene:

44	**D**	***Register twenty.***
45	**PO**	***Twenty what? Appliances?***
46	**D**	***Appliances. If you want you can register more. We wouldn't mind.***
47	**PO**	***No, no*** **[laughter]. [She is answering the journalist on the other telephone line. Then back to the dispatcher]** ***can I ask you something, just in case you know?***
48	**D**	***Yes…***
49	**PO**	***The ambulance service. Which hospital is he taking them to?***
50	**D**	***I heard the X. I heard it on TV.***

The highest-ranking control officer notified the command structure with regard to the incident:

51	**CO**	***Derailment of train; we have in [location]. In the Y station in [location].***
52	**Kronos-15**	***Y station, X.***
53	**CO**	***Yes.***
54	**Kronos-15**	***I am on my way.***
55	**CO**	***Ok, bye.***
56	**Kronos-15**	***Bye.***

And the dissemination of the information continued with notifying the lieutenant commander of the control room. The following is only one of the at least fifteen conversations between the lieutenant commander of the CCC and the senior on-duty control officer. As soon as the latter had a conversation with one of the operations' officers, he communicated the content of the conversation to the control lieutenant commander:

57	***CO***	***Yes… the commander said that he doesn't have a phone to brief the hierarchy.***
58	***LC***	***Yes, yes brief them; call [by his first name] – Mr. Z [by his last name] –***
59	***CO***	***Yes…***
60	***LC***	***I will call Mr. Chief and we will see what's going on.***
61	***CO***	***Good. I will call OSE to see what… if it is freight [meaning train] or not.***
62	***LC***	***Yes that to see if it is freight [train]… that…***
63	***CO***	***It had people so it must have been a train [he means a passenger train] but to find out whether it was the fast train.***
64	***LC***	***Y station you said***
65	***CO***	***Y station, Z street. Yes sir.***

66	***LC***	***Ok, I see.***
67	***CO***	***Ok.***
68	***LC***	***Only the first coach?***
69	***CO***	***Only the first one, yes.***
70	***LC***	***Ok, gather more information.***
71	***CO***	***Yes.***
72	***LC***	***And brief the commander too.***

Meanwhile, one of the control dispatchers was trying to contact the Hellenic Railways Organization (OSE). No provision for a direct telephone line connecting the organization with the HFC had been made. In order to connect to OSE, one of the dispatchers called the *yellow pages* of the Hellenic Telecommunications Organization (OTE) so as to request the telephone line for the customer services of OSE, where he thought he would be able to reach an employee of OSE. Eventually, after making four telephone calls to different services of the OTE and the OSE, the dispatcher reached the individual that had undertaken the responsibility of investigating the circumstances under which the trains had collided. However, whereas the dispatcher requested information as to the number of people riding the commuter train, and as to how they were allocated in the coaches, the OSE investigator abruptly intercepted the dispatcher's line of questioning to announce that the OSE was not interested in this kind of information but in investigating the reasons for the collision. The senior on-duty officer shouted at the dispatchers to keep him up-to-date with regard to whether the first appliances that were mobilized had reached the site of the collision or not. He then called the district commander of the fire-stations in Attica:

73	**LC**	***[addressing the Control fire-officer by his first name]***
74	**CO**	***Yes sir, Mr. District Commander. We have an OSE coach but we don't know which train has been derailed.***
75	**LC**	***Are there anybody injured?***
76	**CO**	***There are none. The people are outside but I am sending a, b, c [rescue-units] to give us an image because I don't have one. I am trying to get one from OSE.***

77	**LC**	***If they [OSE personnel] say something send the Special Units.***
78	**CO**	***Yes sir, I will call you right away.***
79	**LC**	***Call them.***
80	**CO**	***I will.***

Then, the senior control officer, loudly ordered the dispatchers to reach OSE, to contact and to dispatch the Special Unit. Some of the dispatchers were heard answering in the background with resentment: "… heard it…", "…doing it already…"

81	**LC**	***Yes.***
82	**CO**	***We have a train derailment;***
83	**LC**	***Yes.***
84	**CO**	***Not train derailment; coach derailment.***
85	**LC**	***Yes.***
86	**CO**	***The first coach.***
87	**LC**	***A, ha.***
88	**CO**	***On Z street over there, nearby the Y station.***
89	**LC**	***A, ha***
90	**CO**	***You've pulled out the ….***
91	**LC**	***What kind of train is it?***
92	**CO**	***I don't know; I can't contact OSE. Now we are waiting for a police car to arrive and ours are on their way too.***
93	**LC**	***Regulate the traffic*** **[incomprehensible]**
94	**CO**	***I called him now. He is not answering. Just a moment it is the district commander.***

As the rescue operations focused on the two engine-drivers trapped in the engine-room, the senior control officer called the commander of the fire-station that had jurisdiction over the affected area:

95	**CO**	***Hi my commander.***
96	**SC**	***Yes…***
97	**CO**	***How about the drivers. Are they alive?***
98	**SC**	***I am not sure. We are still making our way through. [Addressing the rest of the unit on the rescue-scene: "has anybody had contact with the drivers?"] One is dead. The other seems to be breathing. But we are not sure yet.***

In an effort to obtain a wider perspective of the collision-scene, the senior control officer contacted Kronos-15:

99	**CO**	***Hi John. OSE gave me collision. What is it that you see over there?***
100	**Kronos-15**	***I am not sure about the collision. Things look very strange. [Talking to a bystander: "is that the engine-coach over there? And what about this then?" The rest of the dialogue is inaudible]. George, there is an engine-coach and a train. Yes, it is. It is a collision.***
[follow-up call]		
101	**CO**	***How many people have we rescued?***
102	**Kronos-15**	***I do not know. They [the rescue teams] are working on the two engine-drivers. As for the rest [inaudible]***
103	**CO**	***You need to find out, because the chief is expecting an answer on this issue.***

Although one of the OSE employees reassured control dispatchers that the rails had no power, the senior control officer suggested that they contact the SGCP to monitor any developments with regard to this issue. The communication with the SGCP concerning this matter never took place. When the SGCP got wind of the crisis, one of the on-duty employees contacted the HFC control room. They claimed that they knew nothing about

the incident until the Secretary of the SGCP called and informed them about the emergency. SGCP requested information and the senior control officer obliged them with an answer: the death of one of the engine-drivers, the heavily injured second driver, and the slightly injured passengers. The conversation ended with the SGCP employee asking after a control employee he used to know. In an effort to receive as much information as possible, two control officers called the same operations' officer at the same time: one on the operations' officer's land-line; the other, on his mobile.

During the emergency response, a number of non-HFC employees and other first-responder organizations' personnel contacted the control room so as to inquire after the progress of the response. Amongst them, a senior police officer, secretary to the Minister of Public Order, telephoned the CCC. He identified himself and asked the senior officer to reciprocate. Then he uttered a phrase with an ambivalent meaning:

104	**Police officer**	***So, all well?***
105	**CO**	***Everything is fine.***
106	**Police officer**	***In Med!*** **[Uttered in a very severe style as if he was reprimanding the control officer].**

Moreover, the police officer requested to converse directly with the chief fire-officer. When the senior control officer told him that he could not divert the land line to the chief's mobile, the police officer instructed him to tell the chief to call him at the Ministry. Towards the end of the emergency response, control dispatchers began to track down the appliances they had sent to the collision-scene:

107	**D**	***Which appliance has gone to the incident?***
108	**SO**	***The x and …***
109	**D**	***The x and what's the other one?***
110	**SO**	***And that… other one….***

111	**D**	***Well?***
112	**SO**	***The other one [thinking hard] ehhhhh… I didn't have time to write down the plate number.***
113	**D**	***Is it the x?***
114	**SO**	***Yes, yes, yes,***
115	**D**	***Ok.***

In the midst of the emergency response, at least two fire-officers who were not involved in the response contacted the control room to request information about the emergency. In the meantime, people trapped in elevators, minor apartment fires and a fire that broke out in a factory that manufactured wallpapers occupied control personnel. The wallpaper factory incident triggered a series of communicative interactions: a junior control officer ordered one of the dispatchers to mobilize a certain number and type of appliances:

116	**CO**	***Is the A appliance there?***
117	**D**	***The A, B, C, D, E.***
118	**CO**	***The E appliance?***
119	**D**	***Yes, it is there; the F appliance, though, …***
120	**CO**	***What about the G appliance?***
121	**D**	***I am telling you which appliances are there. The rest are off*** **[to their stations].**
122	**CO**	***The H?***
123	**D**	***It's gone [meaning back to its station].*** ***[… the conversation continues in a similar way]*** ***Ok, let's get it over with. TV is showing scenes from King Kong.***

The CCC is a large hall, divided into five partitions. Three partitions are reserved for the control fire-officers, with one each for the dispatchers and the operators. Direct visual and audio contact through the operators', dispatchers', and the commonly used officers' partition, is almost unhampered. During the above conversation, the control officer called

the dispatcher sitting across the partition, to request an update as to the resources mobilized on the incident-grounds. The dispatcher turned and faced the officer while he was on the phone, enumerating the appliances dispatched. The officer had made a list of the mobilized engines; yet he had put them down in a different order than the dispatcher. So, when the latter started enumerating the dispatched appliances, the former interrupted him repeatedly, so as to ask after the status of engines according to his list. Irritated by repeating the same information at least twice, the dispatcher resorted to a humorous remark, to interrupt an ongoing, redundant conversation.

One of the first operations' employees to reach the fire-scene telephoned the junior officer to provide information on the emergency; then the junior officer loudly announced the content of the information to one of the dispatchers so that the latter could write it down; then the officer loudly ordered another dispatcher to mobilize another type of appliance on the fire-grounds; the press office telephoned to require further information about the fire; the junior officer contacted Kronos-15 to inform him about this emerging incident; then he asked whether there was any information with regard to the progress of the response. Then, the junior officer informed the senior officer about the developments and the commander of the control room about the explosion on the fire-scene and the request made by the operations' unit to send more appliances on the fire-grounds.

Both during and after the rescue operations were over, a few issues came to light, notably the completion of the reports with regard to the emergency response. A junior control officer found that the report produced by the first operations' officer to arrive on the scene of the collision was incomplete. So she contacted the fire-station to ask the officer to fill in the missing details. During the conversation she had with one of the fire-fighters who assisted the operations, she realized that they had not obtained the necessary information to fill in the report properly. While on the phone with her, they were asking each other and their commanding officer whether they had the information she was asking for. Since they had been unable to obtain such information, one of them commented to the junior control officer: "if there is anything wrong with the report call again to let me know." Moreover, when the shifts changed the morning following the collision, both the CCC commander and the deputy chief fire-officer telephoned the senior on-duty control officer of the following watch asking for an overall report with regard to the events that took place during the rescue operations. That control officer was unable to detail the events since the

briefing he received from the officer he replaced was incomplete. He then suggested that the commander should inform the deputy chief fire-officer. This last comment was an epilogue to the events of the previous day.

Episode B: The Square Tower

On the 12th of February 2006, a few minutes after ten o'clock in the evening, a fire broke out in the basement of a large department store, "The Square Tower", in the centre of Athens. In order to put out the fire, control dispatchers mobilized six fire-engines and a senior officer – the incident commander (IC) – for planning and overseeing the emergency response. The IC asserted that the emergency was insignificant and cancelled any further mobilization. However, some forty minutes into the response, control personnel dispatched more appliances on the fire-scene as the initial fire-crews and their appliances were unable to cope with the situation. The following account features a number of actors communicating prior to, during and after the emergency response to the incident. Conversations amongst HFC personnel, between HFC employees and other first-responder organizations and between the HFC employees and their family members or friends shaped the mosaic of the communicative interactions of the day.

The recorded communications revealed that a few minutes before ten o'clock in the evening control employees were involved in discussing issues such as the outcome of a football match that took place earlier that evening, films shown on television and the forthcoming appointment of a new chief and deputy chief fire-officers in the HFC. At a quarter to ten, the smoke detectors alerted the night guard of "the Square Tower" in the centre of Athens. At 21:56, he placed a call to the control room of the HFC to report that smoke was coming out of one of the storage rooms in the basement. As soon as the operator hung up the phone, he shouted at one of the control dispatchers:

1	**COP**	***Hey pal, bring out loads of stuff! "The Square" department store on fire, Panagoulis street 45; fire in the basement.***
2	**D**	***Panagoulis street [he is writing down the information]***
3	**COP**	***Yes, yes, the guard called.***
4	**D**	***Is there a fire?***

5	**COP**	***Eh… yes there is! In the basement.***

The control dispatcher called the operators of the fire-station that had jurisdiction over the affected area and the neighbouring stations and requested the mobilization of six appliances. Yet he encountered a number of difficulties when searching for a 15-ton water-pump to mobilize in order to enhance the water supplies on the fire-scene. The following two conversations took place between the control dispatcher and two of the station operators he contacted:

I.

6	**SO/ female**	***Xth [Athenian fire station]. Speaking.***
7	**D**	***Do you have a 12-ton appliance available?***
8	**SO/ female**	***Noooooooo…***
9	**D**	***Ok, fine.***

II.

10	**SO/ female**	***7th. Speaking.***
11	**D**	***Just a moment…*** **[He speaks on the radio: (operations' unit): we are proceeding to "The Square Tower", Brick square; (D): Rodger, Panagoulis 45… soon].** ***Do you have a 12-ton vehicle in…?***
12	**SO/ female**	***Certainly.***
13	**D**	***Take it out for*** **Panagoulis 45,** ***Brick square.***
14	**SO/ female**	**Panagoulis 45,** ***Brick square. [she takes a note] In what?***
15	**D**	***Yes [he speaks to another line] kratinoy 5, kotzia square [he forgets the question addressed to him***
16	**SO/ female**	***In what? Is it a specific place?***
17	**D**	***Fire, fire!***
18	**SO/ female**	***Ah!***
19	**D**	***In a basement!***
20	**SO/ female**	***In a basement.***
21	**D**	***Quickly, quickly***

22	**SO/ female**	***The 12-ton, right?***
23	**D**	***Yes, yes, yes… the number of the vehicle?***
24	**SO/ female**	***The number of the 12-ton?***
25	**D**	***Yes!***
26	**SO/ female**	***[she provides the number]***
27	**D**	***Ok, thanks 12 tonner.***

He also contacted Kronos 15, who is responsible for assuming the management of emergencies in the district of the city of Athens, to proceed on the incident-grounds. Following Papadopoulos' (the senior control officer on-duty that evening) instructions, the dispatcher advised the IC not to proceed on the fire-scene before the appliances did. Papadopoulos suggested that an individual "running around" the affected premises with no equipment might damage the public image of the fire service.

At the same time, another dispatcher requested that the emergency team from the Electric Company (EC) proceed on-site in order to make sure that the power in the building was cut off from the main power grid. Afterwards, he contacted the Gas Company (GC) to ask whether the gas installations ran under the affected building and if that was the case, how the technical crew of the GC or the fire-fighters could isolate the building from the main supply network. Yet, whereas there is a telephone line that directly connects the control room of the HFC with the emergency unit of the EC, there is no such connection with the GC. As a result, the dispatcher held the line reserved for providing customer services. A third dispatcher contacted the fire station operators from where the appliances were mobilized in order, first, to make sure that the fire-engines were carrying the necessary equipment, such as breathing apparatuses. Second, he requested the plate numbers of the appliances so as to register them in order to keep track of the resources on the fire scene. However, at least two of the fire station operators were unable to remember the plate numbers or access the inventory where they were kept. Instead, the station operators suggested that they should ask their colleagues and re-contact the control room with an answer.

Following the mobilization of the fire-engines, one dispatcher contacted the fire-station in order to ensure that the appliances were carrying all the necessary fire extinguishing equipment. At the same time, one of the dispatchers contacted the fire-investigators' unit to proceed on the fire-scene so and examine the causes of the fire:

28	**D**	***You are on your way [meaning: to examine the cause of fire] to a vehicle, right?***
29	**FI**	***On my way. [meaning: you will give me the address of the new fire-scene when I am on my way there] I do not have a pencil to write it down now.***
30	**D**	***Ok then.***

Not long after the operations were launched, one of the fire-fighters was slightly injured. That incident instigated a set of communication conducts between control dispatchers and the ambulance service employees. The issue raised by the on-duty doctor for the ambulance service was that if the HFC had their own medical unit to respond to HFC personnel's needs, why was the ambulance service required to assist.

After the dispatched appliances were fully deployed on the fire-scene and the operations at their peak, control personnel encountered great difficulty contacting the operations' units on radio, a dispatcher commented: "*We cannot get anybody on the radio"* (31). However, Papadopoulos, the senior CO, eventually managed to get hold of the fire investigator who made his way on the fire-scene before the emergency was completed and gave him some information about the progress of the response:

32	**FI**	***… It is under control… I think… But don't go around telling people… We [the fire investigators] are not fully aware of what went on… But I just heard from a fire-fighter that the incident is controlled… Maybe even [the fire] extinguished.***

While control dispatchers were involved in mobilizing the necessary operations' units to the firegrounds, Papadopoulos finally managed to get on the phone the operations' officer

responsible for managing the emergency response and the IC. Apparently confused, the IC failed to give an accurate account of the situation and tried to reassure Papadopoulos that the incident was rather insignificant and that reinforcements were not necessary. Papadopoulos was puzzled but at the same time he wanted to abnegate any responsibility for what he saw as an upcoming mismanagement of the emergency response. So, he asked the IC to announce via radio that the situation appeared to be under control:

33	**CO**	***The phone calls are driving me crazy. All of them [the high-ranking officers] are worried about the incident. You have to make an announcement. How do you see thinks going? Optimistic or pessimistic?***

The IC was quite reluctant to respond to this question. When Papadopoulos realized that the IC did not know how to make such an announcement via radio, he instructed the IC as to how to structure his speech. The IC repeated verbatim what Papadopoulos instructed him to say and as soon as he did, dispatchers began to recall the appliances. Yet, 40 minutes later, lower-ranking fire-officer on the fire-scene requested reinforcements and dispatchers began to re-dispatch appliances on the incident-grounds. Rather surprised by the progress of the response, Sotiriou, the deputy commander of the control room, telephoned Papadopoulos, who was clearly frustrated by what he perceived as the inefficiency of the IC:

34	**Sotiriou**	***Hey Papadopoulos.***
35	**Papadopoulos**	***Hey commander.***
36	**Sotiriou**	***What's going on?***
37	**Papadopoulos**	***How the hell should I know? I am mobilizing the vehicles again. The same ones; for the same incident.***
38	**Sotiriou**	***Yea I can hear that. Has Kronos left the scene?***
39	**Papadopoulos**	***No, I am trying to get a hold of him but he is in the basement and he is not answering.***
40	**Sotiriou**	***Yes it is turned off. Was he the one to cancel the mobilization?***
41	**Papadopoulos**	***He is the one***

42	**Sotiriou**	***Who is he?***
43	**Papadopoulos**	***Nikolaou.***
44	**Sotiriou**	***What? Where… What is his [original] post?*** **[When the IC occupies a post in administration, he/she becomes operational once every eight days].**
45	**Papadopoulos**	***I think he works at the Headquarters. I don't know.***
46	**Sotiriou**	***Have they managed to make their way to the fire?***
47	**Papadopoulos**	***He told me clearly it [the fire] is in an electric substation so he cancelled the vehicles. So I tell him that I am not cancelling the vehicles from up here. If you want announce that on the radio because I have no image, you do that. And he says ok. And he goes up and cancels all vehicles including the special unit carrying the respiratory devices. And then the 1.1 unit announces that they need more vehicles, reinforcements, and the special respiratory devices' unit.***
48	**Sotiriou**	***Now, are you sending the commander of the station? What have you sent?***
49	**Papadopoulos**	***Yes I call X at least to go over there.***
50	**Sotiriou**	***Will he go?***
51	**Papadopoulos**	***Yes, yes, yes.***
52	**Sotiriou**	***Ok.***
53	**Papadopoulos**	***Ok bye, bye, bye.***

After being dispatched on the fire-scene, the commander of the station placed a call to the control officer in order to ask directions as to how to proceed on the incident-grounds.

54	**CO**	***He [meaning the IC] is near the square. Where does he go from there? [The dispatcher shouted back the directions and the control officer continued his conversation with the IC:] so Z [addressing the IC by his first name] do you know where the Y Street is? You have to take that and you will have visual of the site.***

Shortly after, he re-contacted the control room via radio:

55	**D**	***1.10; transmit.***
56	**CC**	***It's [the fire] in a basement. I am going down. We will not be in contact for a while.***

Papadopoulos received a telephone call from the Mayor's office that was located near the affected building:

57	**Papadopoulos**	***Speaking.***
58	**Mayor's office**	***Yes, good evening. Lieutenant colonel Panagiotou from the Mayor's office.***
59	**Papadopoulos**	***Yes, lieutenant colonel Papadopoulos. I am listening.***
60	**Mayor's office**	***There is something… the Mayor asks about the "Square". Is the "Square" on Panagoulis on fire?***
61	**Papadopoulos**	***A power substation. It's nothing.***
62	**Mayor's office**	***Substation? Electric circuits?***
63	**Papadopoulos**	***Yes, yes, in the second basement. It's nothing. Our people are already there. There is no problem. We are waiting for the E.C.***
64	**Mayor's office**	***So there is no fire; nothing. It's not worth…***
65	**Papadopoulos**	***So what did they tell you that was burning to the grounds? [laughter]***
66	**Mayor's office**	***That the "Square" is on fire from top to bottom. That all Hell broke loose.***
67	**Papadopoulos**	***No, no, no, no.***
68	**Mayor's office**	***So, nothing at all, eh?***
69	**Papadopoulos**	***Yes, yes, yes.***
70	**Mayor's office**	***Thank you very much.***
71	**Papadopoulos**	***Bless you.***
72	**Mayor's office**	***Bless you too.***
73	**Papadopoulos**	***Bye.***

Papadopoulos then called the commander of the control room in order to inform him about the progress of the response. Papadopoulos repeated the information. In addition to what he said to the lieutenant commander:

74	**Papadopoulos**	***[…] although he [Nikolaou] has told me that the fire was located in an electric substation, now I am waiting at least for somebody else to report back to me.***
75	**Commander**	***Who is that asshole? The entertainer*** **[the IC had a degree in arts and, thus, he was labelled as 'entertainer']*?***
76	**Papadopoulos**	***We are fucked.***

A few minutes later, Papadopoulos is heard to exclaim while talking on the phone once more to Sitiriou: "*Nobody talks to me. They are all in the basement"* (77). A few minutes later, Papadopoulos was speaking on the phone to Arma, the manager of the appliances:

78	**Arma**	***What is going on out there? [He uses profanity] who is Kronos 15?***
79	**Papadopoulos**	***Never mind…***

On the way to the fire-scene, the district commander of Attica, Panou, a lieutenant general, called the control officer in order to ask whether the media were notified about the incident. As Papadopoulos was unaware about whether the media were informed by the press office he changed the direction of the conversation to a more practical matter: after retrieving and examining the blueprints of the building he found in the archives, he realized that there was a sprinkler system installed which was not activated. So Papadopoulos suggested that they activate it. But Panou pointed out that it would not be necessary. Papadopoulos then asked the dispatcher after the injured fire-fighter. The dispatcher was unaware about anything else but the station he worked in and so he contacted the station to find out the details.

80	**CO**	**[to dispatcher]** ***It's Hell in there because of the water. Everything is flooded.***

		EC shouldn't give power in the basement.

Following Papadopoulos suggestion, the dispatcher called the Electric Company (EC) once more and then diverted the line to Papadopoulos in order for the latter to make the necessary arrangements with the Electric Company. When the emergency response was almost over and most of the resources were re-dispatched, Sotiriou called Papadopoulos:

81	**S**	***We acted foolishly from the very beginning. On the first place, he [Kronos 15] did not enter the basement.***
82	**P**	***Are you serious? [continues swearing]***
83	**S**	***He did not enter at all. If it wasn't for the officer of the watch of the fire-station, Georgiou, is that it [his name]?***
84	**P**	***Yes, Georgiou.***
85	**S**	***We would have had a more serious problem.***
86	**P**	***Is he [meaning: Nikolaou] insane [using profanity]?***
87	**S**	***"I blew it", that's what he said. Anyway, f[…] it, f[…] it.***

On his way to the fire station, the commander of the station contacts Papadopoulos in order to ask after the injured fire-fighter. Papadopoulos commented that congratulations were in order for the fire-officer of the station who requested the re-mobilization "in time. Because if it wasn't for him, we would have to face greater problems […]. Sometimes we must speak the truth." Simultaneous emergencies and routine events were interwoven with the emergency response to "The Square Towers".

88	**D**	***Colleague…***
89	**Ops' crew**	***Yes.***
90	**D**	***Let's go to Rose [area], there, at the gypsies.***
91	**Ops' crew**	***Rose, where exactly?***
92	**D**	***At the school; over there.***

93	**Ops' crew**	***Ah! Ok.***
94	**D**	***The usual one; over there; you know.***
95	**Ops' crew**	***Ah! Ok.***
96	**D**	***Ok?***
97	**Ops' crew**	***Ok.***
98	**D**	***Thanks.***

One of the off-duty control employees called a colleague to change shifts. Personal communications continued during and after the emergency response with the control personnel that had no or very little tasks to perform engaging in private communicative interactions.

Episode C: Factory on fire

On the 27th of January 2006, at 13:14, civilians called the CCC of the HFC and reported hearing explosions and seeing flames and thick black smoke coming out of the 1.000 m^2 industrial facilities of a plastic manufacturer that was located in the centre of Piraeus. Such fire produces toxic smoke that, when released in the atmosphere in a densely inhabited area, maximizes health risks for bystanders and inhabitants. Fire in a densely populated area also increases the chances of the fire quickly spreading and damaging private property and infrastructure. The damages of such an incident could be considerable on both fronts. Between 13:18 and 13:59, seventeen fire-engines and five transport vehicles were dispatched on the fire scene. Two of the engines were immediately dispatched followed by another eight appliances within the next thirty minutes. During that time, the command structure was notified and six high-ranking officers arrived on the fire-scene.

One hundred and seventeen minutes of recorded conversations revealed the events that took place from the moment the control room was informed about the fire until the time the emergency response was almost completed. This is how the information was transmitted

from the control operator who received it to the control dispatcher who instigated the mobilization:

1	**COP**	***George, take out [missing from utterance: "some fire-engines"] in Piraeus, Lampraki [missing from utterance: "street"] 1.***
2	**D**	***What is it?***
3	**COP**	***In factory*** **[missing: "fire"].**
4	**D**	***In Red [name of the area]?***
5	**COP**	***In Red.***
6	**D**	***Is it a hoax? Because we get that a lot from there.***
7	**COP**	***No, it was a big one from the neighbouring factory [uttered very calmly]***
8	**D**	***What is on fire? What did they tell you?***
9	**COP**	***The factory, they said; am not quite sure what it is, a former*** **[missing from the utterance: "formerly operable"],** ***they said etc…***
10	**D**	***Ok, then.***
11	**COP**	***Ok…***
12	**D**	***Ok…***

Conversations between control dispatchers and station operators: how control dispatchers commenced the emergency response based on the aforementioned information.

13	**D**	***Send your commander and the 12-ton [missing from utterance: "water-pump"]***
14	**SO**	***I cannot hear you [sirens in the background]***
15	**D**	***Send your commander … [speaking slowly]***
16	**SO**	***I am sorry, I am sorry, but I cannot hear you…***
17	**D**	***Oh! Come on already!***
18	**SO**	***I am sorry but I cannot hear anything.***

19	**D**	***Send you commander … [again uttered in dictation speed]***
20	**SO**	***I cannot hear you.***
21	**D**	***Do you not hear me?!***
22	**SO**	***Now I can hear you [the sirens in the background have faded]***
23	**D**	***Send off your commander and the 12-ton.***
24	**SO**	***We do not have a driver for the 12-ton.***
25	**D**	***Nothing?***
26	**SO**	***No, nothing.***
27	**D**	***Ok [uttered in a rather relaxed voice. But then he raises his voice] Your commander on the fire-scene. Do you not have another driver in [missing from utterance: "… the fire station?"]***
28	**SO**	***There isn't … [overlapping]***
29	**D**	***Where is your superintendent?***
30	**SO**	***Pardon?***
31	**D**	***The superintendent responsible for the appliances.***
32	**SO**	***Hold on… he is here, he is here.***
33	**D**	***[raising his voice even more] Then tell him to drive the 12-ton to the incident!***
34	**SO**	***Ok.***

Contacting yet another station operator:

35	**SO**	***Speaking.***
36	**D**	***The 2206 to go to Red. Lampraki 1.***
37	**SO**	***Repeat?***
38	**D**	***[In dictation speed] The 2206 …***
39	**SO**	***Yes…***
40	**D**	***To go to Red [speaking faster] Lampraki 1.***
41	**SO**	***To go to Red… [Taking his time to write down the information. Overlapping]***
42	**D**	***The 2209 already! To go to Red!!***

43	**SO**	***To go to Red you said … the rest? [Missing from utterance: "… of the address?"]***
44	**D**	***Lampraki 1 [pause] for fire [missing: "…extinguishing a fire"].***
45	**SO**	***What for?***
46	**D**	***For fire! Lampraki 1.***
47	**SO**	***I cannot hear you well… [dictating to himself] Lampraki 1…*** ***(The dispatcher hangs up the phone on him).***

And a third one:

48	**SO**	***Xth of Piraeus, speaking.***
49	**D**	***The Centre.***
50	**SO**	***Yes.***
51	**D**	***The 12-ton.***
52	**SO**	***The 12-ton?***
53	**D**	***Yes.***
54	**SO**	***Where to?***
55	**D**	***For Piraeus. Lambraki 1.***
56	**SO**	***Lambraki.***
57	**D**	***Yes, 1. Hey tell me: do you have a ladder or an aerial platform?***
58	**SO**	***Yes, but I don't have anybody to drive them.***
59	**D**	***I don't know what you are to do but you find drivers.***
60	**SO**	***Me, finding drivers?***
61	**D**	***Yes.***
62	**SO**	***I will talk to the officer in charge.***
63	**D**	***Now.***
64	**SO**	***What?***
65	**D**	***Now.***
66	**SO**	***Yes now. When? Tomorrow?***

		[The dispatcher hangs up the phone on him].

The same dispatcher commenting to another dispatcher:

67	**D**	***You watch what I am going to do to the X station […] I will file a report against him.***

Following up conversation between the same two employees, as in lines 48-66:

68	**D**	***Tell me. Did the 12-ton leave?***
69	**SO**	***The 12-ton… you do not allow me to explain (overlapping)***
70	**D**	***[Distressed] Do you people understand what we are telling you? Do you understand?***
71	**SO**	***Yes.***
72	**D**	***We told you to reappoint the crew for the first-response unit to the 12-ton and to send it over to the incident.***
73	**SO**	***Yes, we know that. But [stumbling]***
74	**D**	***I said [overlapping] The first-response, doesn't it [fire appliance] have someone to drive it?***
75	**SO**	***He is getting dressed now [stumbling]***
76	**D**	***[The driver] from the morning shift. Don't you get it already? [In a softer voice] from the morning shift. Don't you get it? [overlapping]***
77	**SO**	***Do you hear me?***
78	**D**	***From the morning shift. Don't you get it already?***
79	**SO**	***Everybody has left and we are waiting for the afternoon driver to arrive. Do you hear me?***
80	**D**	***Don't have a first-response unit?***
81	**SO**	***A first-response unit? The first-response unit has left?***
82	**D**	***Where has it gone to?***
83	**SO**	***Hasn't it gone to the incident***

84	**D**	***The special unit for the respiratory devices has gone to the incident. Where are the rest?***
85	**SO**	***Just wait a moment [confused]***
86	**SO**	***[A few minutes later] discuss it with the on-duty station officer.***
87	**SFO**	***[A station officer – SFO – takes over the conversation]. Hello.***
88	**D**	***Yes, hi.***
89	**SFO**	***We had one first-response fire-engine [in the station] and another one out. And we cancelled the first-response unit to crew the respiratory***
90	**D**	***YOU PEOPLE! The first-response unit? Where is the first- response?***
91	**SFO**	***We cancelled the first-response to crew the respiratory. We did not have a respiratory in the morning.***
The conversation continues with one demanding and the other explaining the action they took to follow the requests made by the control room.		
92	**D**	***I think we cannot understand each other. Ok then. Bye.***

A dispatcher requesting appliances from a fourth station operator:

93	**D**	***Hey tell me, do you have a 12-ton vehicle.***
94	**SO**	***A 12-ton?***
95	**D**	***Yes.***
96	**SO**	***No.***
97	**D**	***What do you have?***
98	**SO**	***A small vehicle.***
99	**D**	***Don't you have another driver?***
100	**SO**	***No.***
101	**D**	***What are you talking about? Are you deranged?***
102	**SO**	***Why should we be deranged?***
103	**D**	***Yea, ok, whatever.***

In their effort to locate 12-ton appliances, dispatchers contacted at least five different stations near the affected area. One station commander, having made the necessary changes to the on-duty personnel, managed to form an operations' unit so as to staff a 12-ton appliance. He then contacted the dispatchers to inform them about these changes. The dispatcher who answered the call replied that it would be in the service's best interest not to strip all stations from their appliances and to reserve resources for other emergencies. However, the station commander placed a call to the lieutenant commander of the CCC and repeated the exact same information. The lieutenant commander ordered the appliance to proceed on the fire-scene. A few hours into the emergency response, one of the operations' units contacted the control dispatchers:

104	**Ops' units**	***Is the fire under control?***
105	**D**	***Your commander will let you know.***

Inter-organizational communication: How control employees conversed with other first-responder organizations, in the following case with the EC that usually arrives on fire-scenes so as to cut down the power of the affected building from the main power grid:

106	**D**	***Lambraki 1, in Red, for fire***
107	**EC**	***[too much background noise] Speak louder. I cannot hear you at all.***
108	**D**	***Hey EC. Lambraki 1, in Red, for fire.***
109	**EC**	***Just a moment just a moment [addressing the personnel in the control room of the EC] Keep it down; keep it down [addressing the D]. Ok, tell me.***
110	**D**	***Lambraki 1 [shouting at another control dispatcher: "Isn't it 1?"] Lambraki 1 in Red.***
111	**EC**	***Lambraki?***
112	**D**	***1 in Red; fire in a factory [uttered fast]***
113	**EC**	***Fire in a factory?***
114	**D**	***Yes, yes [speaks on the radio on the same time]***

115	**EC**	***Lambraki 1 in Red. Ok.***
116	**D**	***Yes, yes.***
117	**EC**	***[whispering] Lambraki 1 … [louder]. Ok!***
The control dispatcher hangs up.		

Intra-organizational communication between a control officer and a control dispatcher: The control officer is forwarding the request made by one of the ICs on the fire-scene, Papas:

118	**D**	***Yes.***
119	**CO**	***George, Papas said …***
120	**D**	***Yes…***
121	**CO**	***… To tell to the first fire-engine that will arrive to go through the…***
122	**D**	***Yes…***
123	**CO**	***…the Lambraki…***
124	**D**	***Papas, [in a lower voice] Papas, call him and tell him that I cannot control the appliances from here. He needs…***
125	**CO**	***You just say on the radio that the first appliances to arrive approach from Lambraki and the other from the next street.***
126	**D**	***And how am I supposed to know which one arrive first? He is the one who is there and he can see them approaching. I do not have an image from over here.***
127	**CO**	***Let him manage then.***
128	**D**	***I cannot help him from over here. Call him and tell him that he should manage them. Arma is on its way there.***
129	**CO**	***Ok then. Bye.***
[More discussions follow between control dispatchers and operations and station personnel with regard to involving the control dispatchers in managing the appliances on the fire-scene]		

During the emergency response, one HFC employee who was working in the General Storages of the service was ordered to transport certain equipment on the fire-scene. Due to the fact that he had hardly used the radio in the past, he was reluctant to transmit any information via such channel. However, the lieutenant commander of the CCC, to whom he expressed his reservations, gave him the necessary instructions:

130	**LC**	***Centre for X vehicle, I am proceeding to the X street in order to carry the z material.***

Intra-organizational communication between control dispatcher and high-ranking IC (IC), answering to the code name *Ares*:

131	**IC**	***Please, this is not an acceptable situation. I am in the middle of the fire and I don't have any appliances! Where are the appliances!?***
132	**D**	***Ares, we are informing you that the appliances, the type that are attending the incident, have all gone for replenishment. They have used all their water supplies and they are going for replenishment. […]***
133	**D**	***We are instructing them to return as soon as possible and we are giving them the nearest hydrants and different [hydrants] so as to come [and rejoin the extinguishing operations] as soon as possible.***
134	**IC**	***[In a frantic state of mind, Ares screams] This is an unacceptable situation. I have no appliances on the fire grounds… Is anybody listening to Ares? [screaming, in a frantic state of mind]***
135	**D**	***Received [roger]. 882 [type of appliance] [proceed] soon; soon. And try to talk [communicate]. Be in touch with Ares.***
136	**IC**	***Centre [CCC] they will be in contact with you. Leave Ares out of it. Centre dispatch anything that is available in the city of Athens.***
137	**IC**	***[To Arma] I want the water and the breathing apparatus coming in constantly.***
138	**Arma**	***[To IC] They are coming commander, sir, they are coming.***

Intra-organizational communication between control officer A and operations' officer B:

139	**A**	***How is it [the emergency response] going?***
140	**B**	***We were doing well. We are entering the burning building slowly. But the roof seems to be giving way… Nevertheless we are proceeding.***
141	**A**	***Ok. Good. Bye.***

Intra-organizational communication between control officer D and operations' officer C:

142	**D**	***Yes?***
143	**C**	***John, my friend, I want you to close all the streets for me and… I need foam and let the higher in the hierarchy know what is going on and to proceed on-site… many kisses.***

Intra-organizational communication between control officer A and operations' officer C:

144	**A**	***How is it going?***
145	**C**	***We need water to control it [the fire]. If we had water we would have finished already***
146	**A**	***Arma must have been informed about the whereabouts of the hydrants***

Intra-organizational communication between an operations' unit on its way to the incident and a control dispatcher:

147	**Ops' unit**	***For Lambraki, is there access from Nikolopoulou [street]?***
148	**CO**	***Excuse me?!***
149	**Ops' unit**	***From 2206. For Lambraki, is there access from Nikolopoulou?***
150	**CO**	***[to control dispatcher] Is there access from Nikolopoulou for him?***

151	**D**	***Who?!***
152	**CO**	***2206***
153	**D**	***(inaudible)***
154	**CO**	***[to ops' unit] Yes, yes; there is access from Nikolopoulou.***

Random conversations: how fire-officers who are not involved in an emergency response arbitrarily contact the control room in order to seek information with regard to an emergency:

155	**D**	***Hey, Kostas.***
156	**Random HFC employee**	***I am calling from Green [area in Athens]. I am not Kostas. I am Papadopoulos. Who is this?***
157	**D**	***Speak up Papadopoulos.***
158	**Random HFC employee**	***Is there a big fire in Brown?***
159	**D**	***No, in Red.***
160	**Random HFC employee**	***In Red? Where?***
161	**D**	***There. In a factory. With plastics.***
162	**Random HFC employee**	***Plastics?***
163	**D**	***Yes.***
164	**Random HFC employee**	***Ok. Kisses.***

While the control room was managing the industrial emergency, one of the provincial control rooms contacted the central control room to announce that a number of forest fires that broke out were still not under control. The lieutenant of the control room commented:

165	**LC**	***Tell them to wrap them up. We need an estimation of the damages. I don't care if they [fire-fighters on-site] finish what they are doing in five days… we just need an estimation, and they can close it in two days… they can even stay for 10 days, we don't mind… as long as we avoid any malarkey… and***

		let them stay for three days even.

Around the same time, another provincial control room announced that a fire erupted in a ginning house, the same facilities that were on fire a few weeks earlier, when the owner died in an effort to abandon the house:

166	**Senior CO**	***Let the rest [of the facilities] burn and leave us be!***
167	**Provincial operator**	***There seems to be no problem. Only smoke is coming out of the cotton wool.***
168	**Senior CO**	***That is what they said the other time as well and instead of those couple of vehicles they send, we eventually had to send 15! And a person died!***

Processing documentation is part of the routine events in which control and operations' personnel are involved. After the emergency response, on his way back to the fire-station, the fire-officer assigned with completing the report, called the control room and asked the dispatchers to send him a fax with the list with the number and type of appliances dispatched on the fire-scene. The control dispatcher counter-proposed that on his return to the station, the officer should re-contact him and that he would then send the list with the appliances used on the incident-grounds. Moreover, during the emergency, control personnel were obliged to fax the newly published Service Order to the urban and rural fire station. Raging, the commander commented:

169	**CC**	***They [headquarters] have that imbecile X [the superintendent of the Headquarters secretariat at the time] to send off the orders.***
170	**LC**	***Can't the headquarters send their own orders? And they send them over to me now, look it's already 14:30, on a Friday afternoon. They want to go away for the weekend, fuck it… And if these orders do not reach their destination by Monday it will be our fault. The Hell with these assholes! I am going to report them and I am going to send it down [to the Headquarters]. Ok, bye for now.***

Episode D: Fire in a hotel

On the 17th of November 2005, a little after 19:30, the CCC received an increasing number of phone calls made by both civilians and police operators with regard to a fire that broke out in a hotel which was located in the centre of Athens. During that fire, an old man, who was trapped in one of the hotel rooms, died. On that same day, in that very area, approximately thirty minutes earlier, the HFC was involved in extinguishing small fires that erupted in the centre of Athens, which were deliberately caused by demonstrators celebrating the annual anniversary for the overthrow of junta. During such demonstrations, a number of parked cars are often set on fire and fire appliances as well as police vehicles and fire-engines that appear on-site are usually vandalized. Around the same time, due to extreme weather conditions, an increasing number of telephone calls made mostly by civilians alerted the control room. Sudden rainfall caused various parts of Athens to flood. Civilians were requesting assistance with regard to draining waters from basements or assisting individuals trapped in vehicles that were stuck in the middle of the flooded areas.

The control room of the HFC was receiving contradictory information: others maintained that the fire broke out on the first, others on the third, floor. As a result, nobody knew whether the affected floor or floors were properly evacuated by the occupants of the hotel rooms. As soon as the dispatcher got hold of the information, he dispatched the IC on-scene:

1	**Kronos-15**	***We are going to University street, to a hotel.***
2	**D**	***Yes…***
3	**Kronos-15**	***Information is contradictory. Either the 2nd or 3rd floor, the police says, they see smoke coming out. And so says the owner.***
4	**D**	***Ok.***
5	**Kronos-15**	***Ok?***
6	**D**	***Yes.***

The commander of the fire-station was already on the firegrounds, when one of the on-duty control officers called to ask for information concerning the affected building:

7	**SO**	***Tell me, what's on fire.***
8	**CO**	***Hotel. The third floor.***
9	**SO**	***The third floor? The commander told me it was the fourth.***
10	**CO**	***Kronos driver told me that there were only three floors.***
11	**SO**	***Ok, ok. What's on fire?***
12	**CO**	***[…]***
13	**SO**	***How many appliances do we have?***
14	**CO**	***One, two, three, four… eight.***
15	**SO**	***Eight. Ok then.***

In addition, control employees were receiving information that due to the increasing vandalisms the police had cut off many of the main roads in the city centre and the traffic was aggravated. On its way to the incident, at least three of the operations' units called the control to inform them about their whereabouts:

16	**Ops' unit**	***We are approaching but the traffic is heavy.***

Although the fire appliances were dispatched immediately on the fire scene, they failed to reach the incident-grounds promptly. Being aware of the inevitable delay, fire-fighters launched their operations as soon as they reached the site and temporarily cut off their communication with the control room as redundant. As a result, control personnel had very little knowledge with regard to the progress of the operations on-site.

When the senior control officer contacted the CCC lieutenant commander to report on the incident, he made an inappropriate remark about the hotel being a "house of ill repute". He

made an assumption based on the hotel's location. During their conversation, the lieutenant commander commented that the control commander was in contact with the deputy chief fire-officer, exchanging information, assessing the emergency and planning the response. All other higher- and lower-ranking employees were on a need-to-know basis and virtually excluded from the decision-making process between the two high-ranking officers. The only HFC employees who were up-to-date about the progress of the response, were the personnel of the press office because of their involvement with the media.

Not long after the IC had reached the scene, the commander of the CCC called his mobile. As the IC was attending to the fire-fighting operations, he had left his mobile with his driver, an eligible fire-fighter. According to the audio archive, the commander of the CCC intended to pass on information and requested details about the progress of the response. Nonetheless, as soon as the commander of the CCC realized that he was on the phone with a fire-fighter, he deliberately interrupted the information exchange and simply left a message for the IC to return his phone call. More than half an hour into the emergency response, control personnel were kept into the dark about the name of the hotel where the fire erupted as well as the number of floors the hotel had.

17	**CC**	***[to the control officer] Do we know the name of the hotel?***
18	**CO**	***[to the dispatchers] Do we know the name of the hotel?***
19	**D**	***[amongst them] Do we know the name of the hotel?***
20	**D**	***[to the control officer] No.***
21	**CO**	***Ok.***

One of the control dispatchers contacted one of the fire-station operators and requested the telephone number of the on-duty operations' officer of the station. Yet, the operator was unable to meet the request. The control officer retrieved the phone-number from his note-pad. Eventually, one of the control officers contacted the driver of the IC and requested this information. The driver was unable to give them the name of the hotel but counted out loud the floors of the building. The emergency response was further aggravated by the fact that there was no unified command on the scene and different operations' officers were

giving fire-fighters different, often contradictory, orders. As a result, fire-fighting crews were acting independently of the order they were given, which resulted in a lack of coordination.

22	**PO**	***What's going on?***
23	**CO**	***What' going on? Mayhem. Wait. [On-radio transmission of inaudible information]. I will call you back.***
24	**PO**	***Can't you tell me now?***
25	**CO**	***No it's mayhem in here.***

As soon as the emergency response was over, one of the operations' officers contacted one of the control officers and requested that some operations' units return to their fire-stations in order to change out of their wet clothes. The control officer replied that he would contact the operations' officer as soon as he made a decision. Then he called the fire station to ask whether there were any replacements for the operations' unit. After uttering his request, the station operator replied:

26	**SO**	***And who might you be, pal?***

On another front, that of the effects of the extreme weather conditions (spade phenomena), a station commander placed a call to one of the control officers:

27	**CO**	***Speaking.***
28	**SO**	***Hi Yannis. How are you?***
29	**CO**	***Fine, fine, George.***
30	**SC**	***How is it going with the incidents, there, in Red [name of area]?***
31	**CO**	***We've got more than 40.***
32	**SC**	***Yes, ok… let me tell you something… [hesitating]***

<table>
<tr><td>33</td><td>CO</td><td>Yes…</td></tr>
<tr><td>34</td><td>SC</td><td>Ehhhhhh…. One of my appliances is going… [Interrupted by Yannis but inaudible what Yannis is saying].</td></tr>
<tr><td>35</td><td>CO</td><td>They [control personnel]… ehhh…. have given it [the appliance's itinerary]… ehhh… but there is a person I know…. from the navy... ehhh… a captain, and… ehhh… I have given them [the crew of the appliance] the address… ehhh…</td></tr>
<tr><td>36</td><td>CO</td><td>Wait just a moment George… Speaking [the dispatcher to Yannis: "The commander of the fire Academy"]
<table>
<tr><td>37</td><td>CO</td><td>Yes, commander, sir, this is Yannis Papadopoulos. How are you?</td></tr>
<tr><td>38</td><td>Commander of the Fire Academy</td><td>Hi Yannis, how are you?</td></tr>
<tr><td>39</td><td>CO</td><td>I am fine, I am fine and you?</td></tr>
<tr><td>40</td><td>CFA</td><td>Who called the Academy and gave the order for the cadets to leave?</td></tr>
<tr><td>41</td><td>CO</td><td>Not for the cadets to leave. You had a stand by unit, did you not?</td></tr>
<tr><td>42</td><td>CFA</td><td>Stand-by units come and go…</td></tr>
<tr><td>43</td><td>CO</td><td>Apart from the unit you had in the Academy…</td></tr>
<tr><td>44</td><td>CFA</td><td>Yes…</td></tr>
<tr><td>45</td><td>CO</td><td>Did you have another unit in Athens?</td></tr>
<tr><td>46</td><td>CFA</td><td>Tell what was the order given?</td></tr>
<tr><td>47</td><td>CO</td><td>My commander told me that the stand-by units are to be dismissed.</td></tr>
<tr><td>48</td><td>CFA</td><td>Ok. Case closed.</td></tr>
<tr><td>49</td><td>CO</td><td>Ok?</td></tr>
<tr><td>50</td><td>CFA</td><td>Ok, bye.</td></tr>
<tr><td>51</td><td>CO</td><td>Ok, good bye sir.</td></tr>
</table>
Yes?</td></tr>
</table>

52	**SC**	***Yes. It is near the Military Academy. One of my appliances is moving towards that area…***
53	**CO**	***Yes?***
54	**SC**	***And I told them to go over there. It is Artemis street …***
55	**CO**	***Yes, I understood, I understood. What's wrong with him?***
56	**SC**	***What?***
57	**CO**	***What's wrong with him?***
58	**SC**	***Nothing. He flooded.***
59	**CO**	***Has he called it in?***
60	**SC**	***Yes he has.***
61	**CO**	***No he hasn't. I can't see it in here.***
62	**SC**	***Artemis St.***
63	**CO**	***No it isn't in here.***
64	**SC**	***Where did that asshole report it?***
65	**CO**	***No, wait. He has reported it and we have already dispatched an appliance. It is in progress.***
66	**SC**	***Is it in progress?***
67	**CO**	***Yes.***
68	**SC**	***Ok then.***
69	**CO**	***Ok. [The dialogue continues for a few more seconds with greetings between the officers]***

Due to the multiplicity of emergencies, cadets were recalled to report to their stations. When the recall order was over, the CCC failed to inform the cadets. Failure to inform all station where cadets were standing-by resulted in an increasing number of individual phone calls by the cadets to the CCC for this matter. After receiving an order from the control commander, another control officer contacted a station operator in order to mobilize more units to respond to the incidents caused by the spate phenomena:

70	**CO**	***The commander told us not to send them.***
71	**SO**	***Send the appliances. Send them.***
72	**CO**	***You want to look into that?... Ah! Ok then. Send them. Thank you.***
73	**SO**	***Have got the emergencies down?***
74	**CO**	***I do not know. The list is with the lieutenant commander inside [his office]. Is it convenient for you to give them to me again in case he has thrown it [the list] away? The first was…***
75	**SO**	***Look for it first and then… it a mayhem here.*** **[overlapping]**

At another front, civilians were calling the 1-9-9 emergency-number and requesting assistance. The following dialogue took place between a civilian and a control operator during a minor emergency with regard to a fire erupting in a public building:

76	**COP**	***Wait a moment, please. I have to write down the address you are giving me (CCC of the HFC operator)***
77	**Civilian**	***But I can't calm down. I am panicking.***
78	**COP**	***Yes, but I have to take down the address. So calm down and repeat it!***

In the midst of this turbulence, the operators of the CCC were involved in conversations with civilians who demanded to be assisted with situations that the HFC had very little or no jurisdiction. In at least one case, the HFC could not drain the water from the basement of a house. As the water level remained low despite the continuation of the spate phenomena (bad weather conditions), the caller who requested the assistance of the fire service replied with sarcasm: "You won't come tonight to drain the water which is five cm then you will come tomorrow when it will be over 15 cm!" One of the CCC employees had explained to her that the equipment would not be of any use with such low water levels.

On another front, the crew of the fire-engine on the demonstrations-scene contacted one of the control officers in order to request its re-dispatching to the station due to the fact that all police vehicles were removed from the scene. The officer replied that only the deputy

chief could give such an order but the control officer would not interrupt him, as he was involved in the emergency response to the hotel. And so he ordered the unit to stay put. After a significant amount of time went by, the former called the police in order to seeking information concerning the mobilization of the police units in the area where the fire-fighting vehicles remained unguarded. On the other end of the line, the officer who answered the phone diverted the call to his superintendent, commenting:

79	**Police officer**	***A fire person with the rank of lieutenant colonel needs to speak to you because he wants to make a decision.***

These simultaneous crises led the senior control officer to comment upon the inadequate tracking of the resources deployed: "*We have lost the ball!" (80)*. During all this time, a couple of vehicles were reported to have broken down on their way to the incident. The way the control operators diverted the incoming phone-calls to the rest of the control personnel caused frustration. During another incident, the operations' unit feared for a gas leak. They contacted the control and asked whether the SGCP had been notified. The control officer who took the call replied that they had been informed but as soon as the officer ended the conversation it was made clear that the SGCP had not been notified. Towards the end of the emergency response to the hotel and when the demonstrations began to settle:

81	**CO**	***Are you going to dismiss Papas?***
82	**LC**	***Send him away. Do whatever you want with him***
83	**CO**	***He is getting on my nerves. Hotel, apartments, you name it…***
84	**LC**	***It's not his fault.***
85	**CO**	***Whose fault is it?***
86	**LC**	***So what's up***
87	**CO**	***I am waiting for somebody to arrive [meaning: on-scene]. Loads of smoke, they say…***
88	**LC**	***Ok.***

89	**CO**	***We'll see. I will let you know.***

Episode E: The case of the of the Cypriot 737 - 300 Boeing air crash

On the 14th of August 2005, at 12:06, a 737-300 Boeing of the Cypriot airliner "Helios" carrying 115 passengers and six crew members, crashed into a hill near Athens. It was the second highest death-toll for an aviation accident in 2005. The Cypriot Boeing was scheduled to depart from Larnaca to Prague via Athens at 09:00. It left the airport at 09:07. At 09:37, it entered Greek airspace. At 10:07 all communications broke off. Twenty five minutes later, a renegade alert was issued. At 11:20 two F16 fighters (type of military aircraft) intercepted the airplane and forty five minutes later the commuter aircraft crashed on the Varnava hill, in the area of Grammatiko, in Attica. Numerous scenarios overwhelmed both the emergency centres of the fire-responder organizations and, soon after, the media. The initial scenario of hijacking was ruled out by the Greek Ministry of Foreign Affaires, although an altered photograph picturing an F16 taking down the commuter airplane made the front pages of some of the Athenian newspapers. It is now believed that while airborne the plane experienced a fatal problem in the process of pressurization. The loss of cabin pressure generated an environment of extreme cold and lack of oxygen that according to the specialists may have probably led to the passengers' death before the crash.

The HFC was first notified about the situation at 11:11. A second call was made at 11:36 before the third call alerted the control room of the HFC, a minute after the plane crashed. Between the first and third calls, the control room had two operations' units standing by in the wider airport area. In the meantime, the HFC emergency centre notified the control room of the ambulance service about the potential emergency. After the plane crashed, it took the operations' units 30 minutes to locate the remains and proceed on-site. Between 12:04 and 17:50, thirty one fire-fighting appliances and seven rescue units were mobilized. Fifty-eight operational and transport vehicles spread over the crash-scene searching for survivors, accumulating body-parts and putting out the fire that was rapidly burning across the nearby forest area maintained by the jet fuels.

During this episode, civilians were contacting control personnel; control personnel were in touch with other first-responder organizations and HFC employees were contacting each other. These internal communications took place among employees of the control room, between operations and control employees, control personnel and employees from the regional and local, urban and rural fire stations, between control personnel and the press office employees, and between control personnel and employees working in the headquarters. Between an individual – later identified as one of the fire-fighters employed at the airport fire station – and one of the control operators:

1	**Fire-fighter from the airport fire station (FF)**	***Yes, hello. I am calling from the Eleftherios Venizelos airport…***
2	**COP**	***Yes…***
3	**FF**	***We were notified by the tower that two fighting aircrafts are flying next to the airplane right this moment… and they are seeing the pilots in the cock pit wearing masks and leaning forward… and there is lack of communication (overlapping)…***
4	**COP**	***Hold on a moment. I will connect you to the officer in charge… Wait a moment.***
5	**FF**	***Yes, yes…***

The call was diverted to one the on-duty control officers, one of the actual managers of the information:

6	**FF**	***Hello. I am calling from Elefterios Venizelos. Can I have your name?***
7	**CO**	***Officer Yannou.***
8	**FF**	***We were notified by the tower that two fighting aircrafts are flying next to the airplane right this moment… and they are seeing the pilots in the cock pit wearing masks and leaning forward… and there is lack of communication.***
9	**CO**	***Have you contacted us before for this incident?***
10	**FF**	***Yes, yes, we called earlier [pause]*** ***An airplane flying to Athens from Larnaca…***
11	**CO**	***Yes…***
12	**FF**	***…is experiencing lack of communication and problems with the cooling system***
13	**CO**	***Is the plane flying right at this moment?***
14	**FF**	***Yes, yes.***
15	**CO**	***And there came… went… the fighters…***
16	**FF**	***Yes, and they are right beside it.***

17	**CO**	***Yes?***
18	**FF**	***And there is no communication with the tower.***
19	**CO**	***And what do they see? You mentioned something concerning the pilots.***
20	**FF**	***Yes, they [the subject remains undefined] said that the pilots are leaning forward.***
21	**CO**	***How many passengers was/is that carrying?***
22	**FF**	***121. It's a Boeing (overlapping)*** **[then they pause for a few seconds before the control officer asks what kind of plans they are laying out].**
23	**FF**	***Eh… nothing we are just sitting here… waiting…***
24	**CO**	***Have you told your commander?***
25	**FF**	***Yes, yes, yes.***
26	**CO**	***He knows, eh?***
27	**FF**	***Yeah, sure…***
28	**CO**	***Ok, do you want something from us?***
29	**FF**	***No I am just letting you know.***
30	**CO**	***Very well, very well…***
31	**FF**	***Ok?***
32	**CO**	***Thank you very much.***
33	**FF**	***You are welcome.***

Intra-organizational communication between one on-duty control officer and the lieutenant commander A of the control room:

34	**CO**	***Serious problem at Spata [pause]. A Cypriot airliner is approaching with serious damage in the cooling system [pause. Then addressing another CO] Yannis, what else did the … [he forgets who gave the information to Yannis] tell you?***
35	**A**	***What is the nature of the damage and what does the airport needs from us to do?***
36	**CO**	***[he repeats almost verbatim what Yannis told him]***
37	**A**	***And they [the pilots of the fighting aircrafts] saw the pilots [of the Boeing] unconscious?***
38	**CO**	***Two fighting aircrafts. From the sides [meaning: both fighters flying from each side of the commuter plane]. Ours.***

One of the control officers informs a station commander: "*There must be a very serious incident […] it concerns a plane crash" (39).* Intra-organizational communication between one on-duty control officer and the press office of the HFC:

40	**PO**	***Hey there! Is everything fine? Do we have something at Venizelos?***
41	**CO**	***We have something rather serious… wait the superintendent just contacted them… [overlapping, loud laughter and noise in the background]***
42	**PO**	***Tell me what exactly is it about so I can tell them [missing: the journalists]***
43	**CO**	***What have you heard?***
44	**PO**	***Nothing. They [the journalists] just telephoned me and asked me if there is something. He [the journalist] doesn't know anything. What is it?***
45	**CO**	***[Puts the press office on hold and addresses the senior CO] Should I tell the press office superintendent? Excuse me Mr X [his "superintendent"]. What I told you did he himself tell you, as well? [This does not make much sense in Greek either. What, after a careful examination of the dialogues, appears to have happened is that this officer asked his superintendent whether his superintendent was given the same this junior officer had provided a little while before this conversation took place. What develops here is a conversation within the conversation: seeking advice to inform the press office and on the same time seeking verification about what the junior had said to the senior a few minutes before. Then the officer provides the same information almost verbatim to the press office employee].***
The 2nd follow up call:		
46	**PO**	***There is no vehicle on-site, isn't that so?***
47	**CO**	***What on earth are you talking about? It is really high up! 34.000 ft up! The plane is in the air.***
48	**PO**	***A! It is flying! I thought it was down! And you said that two more passed by… aircrafts? (Overlapping). And said that they have fainted?***
49	**CO**	***Military aircrafts yes… they have fainted. Leaning forward, anyway.***
50	**PO**	***I got it. Ok. Done.***
51	**CO**	***We don't know what…***
52	**PO**	***Ok. Ok.***
In the 3rd conversation, the distortion continues		
53	**PO**	***Were they our Canadair that went by and saw them?***

Communication between senior fire-officer and the operator of a fire station located in the area near the crash-site:

54	**D**	***Haven't you had a call [yet] concerning a plane crash?***
55	**SO**	***Us! No for God's sake!***

Communication between a senior A and a junior B control fire-officer:

56	**B**	***Commander, sir.***
57	**A**	***Yannis, have you notified the SGCP about this incident?***
58	**B**	***… For this incident, no.***
59	**A**	***Look into that, look into that!***
60	**B**	***Right away, right away.***
61	**A**	***Let them know as well. We have notified the Secretary GCP. But the Secretariat, their CCC… the people should know.***
62	**B**	***Right away, right away.***
63	**A**	***Do it now!***

Control employees neglected to inform the SGCP about the information they received and the plans they laid out. They had, however, informed the Secretary GCP, who was a former fire chief. After the plane-crash, a conversation between one CO and two employees of the SGCP took place:

64	**SGCP-A**	***Secretariat GCP, speaking.***
65	**CO**	***Hello fellows. From the CCC.***
66	**SGCP-A**	***Hello,*** **[this is]** ***Georgiou*** **[speaking].**
67	**CO**	***Hello. It's officer Papas.***
68	**SGCP-A**	***Yes.***
69	**CO**	***Eh…eh…eh… I imagine that you have been informed about the plane, isn't that so?***
70	**SGCP-A**	***Yes, yes, we have and we have contacted the airport.***

71	**CO**	***Eh…eh… Will you need anything from us?***
72	**SGCP-A**	***Not at the moment, as [the plane] is in the process of landing.***
73	**CO**	***It has crashed, they said…***
74	**SGCP-A**	***It's DOWN?... Hey Zeus*** **[Georgiou talks to his superintendent off the line]*, it's down …*** **[to officer Papas]** ***Who told you that? I have spoken*** **[the object of the verb was not identified]** ***a little while ago. Who has told you that?***
75	**CO**	**[Papas is speaking to someone in the CCC]** ***it was seen by one of the ops' units in the area, right?***
76	**SGCP-A**	***Wait a moment, wait a moment…*** **[confusion about who is talking to whom]**
77	**CO**	***Unfortunately, we have just been told by one of the units that the plane crashed.***
78	**SGCP-A**	***Ah! Mr Zeus, the CCC of the HFC says that the plane crashed*** **[Georgiou talking to somebody in the SGCP again].**
79	**SGCP-B**	***Yes, can you hear me?*** **[Now Zeus is continuing with the conversation].**
80	**CO**	***Of course.***
81	**SGCP-B**	***I spoke to the police, it is just a minute ago, and they told me that it [probably meaning the airplane] is in communication with the tower e…e…e… the plane and that it is in the process of landing. (Civil Protection)***
82	**CO**	***It has crashed in Grammatiko so they say…***
83	**SGCP-B**	***Between Grammatiko and Varnava?***
84	**CO**	***Yes…***
85	**SGCP-B**	***Who are you?***
86	**CO**	***Lieutenant Papas.***
87	**SGCP-B**	***Mr. Papas?***
88	**CO**	***Now I, too, am lost.***
89	**SGCP-B**	***What do I know? I lost my mind… well… ok, we will communicate again. Hang up.***
90	**CO**	***Yes, yes, thank you very much.***
91	**SGCP-B**	***Yes, yes, bye, bye, bye.***

After the crash, numerous other communications take place, between a control officer and HFC doctor:

92	**CO**	**[After introducing himself and greeting the doctor]** ***To inform you. He*** **[meaning: the lieutenant commander]** ***asked us to send a doctor on-site [crash-site]. We are facing an incident concerning a plane that crashed; I don't know if you know anything about it.***
93	**Doctor**	***I just heard.***
94	**CO**	***So you heard. Mr. Andreou and the fire chief are on-site.***

Meanwhile, the highest-ranking on-duty control officer contacts the lieutenant commander of the CCC: "*The commander of the airport fire station will arrive on-site shortly and then we will have a better image of what's happening" (95).* During the emergency response, one of the HFC engineers contacted the CCC so as to request details with regard to the incident.

96	**CO**	***Kronos 14 is going on-site. If I need you I will call you.***
97	**Specialist**	***Ok [then]. What kind of an airplane is it?***
98	**CO**	***It is a Boeing 737 from a Cypriot airline.***
99	**Specialist**	***Hey, now … [I] need to go [she addresses the CCC officer by his first name]. It is a subject I am very keen on.***
100	**CO**	***I'll talk to the command structure and I will call you back.***

Kronos-14 is the code name of the field officer who supervises the sector where the plane crash occurred. When the specialist fire-officer contacted the CCC, the officer was appointed to supervise another sector. The specialist suggested being reassigned to the crash-site. However, no procedures indicate that a specialist fire-officer should be on the incident-grounds, despite the logical expectations to the contrary. The topic of the conversation that took place between the control officer and the control commander was the request of the specialist:

101	**CO**	***Kronos 12 is* [the name of the officer]. *Can* [the officer] *go over there?***
102	**CC**	***Who else is there? That is out of [the officer's] jurisdiction.***
103	**CO**	***I know it is. But because… because of [the officer's] specialization.***
104	**CC**	***What does specialization have to do with this? No. And that's final. Bye.***

After contacting the CCC commander, the CCC officer forwarded the commander's reply to the specialist's request. Once more, when answering the call, the specialist addressed the senior CCC officer by his first name, whereas he addressed the specialist in a rather formal way:

105	**Specialist**	***Now, in my opinion, the service has one qualified expert and I should be on my way there. But now I am going back to [the specialist's sector] Mr. A [the chemist fire-officer who gave the information about the wings of the plane containing uranium] is a chemical engineer. He has no connection to airplanes. […] I could have been replaced by Z [Kronos 14] here [the specialist's sector] and I could have gone there [the incident-grounds]. That is MY job. There will be one accident in my career for me to help with … Anyway… it is the chief who has to order this now [she expresses her feeling that the chief wouldn't agree with her being on-site] […] Anyway, I will be talking to [another aeronautical engineer] so as to get all the necessary information [verify the risks presented by the aircraft to the operations' personnel].***

Communication between a control officer and an operations' officer, when conversing with regard to the wings of the airplane containing uranium:

106	**Ops' officer**	***It would be best for us to let the people working on the wreckage know so as not to do anything without protection.***
107	**CO**	***We have informed our superiors repeatedly.***

In the meantime, one of the control officers contacts the specialist so as to reply to her request:

108	**CO**	***Ms [first name].***
109	**Specialist**	***Tell A. (she is calling him by his first name even though she shouldn't because she is a captain and he is a lieutenant colonel)***
110	**CO**	***You are not to go.***
111	**Specialist**	***Good. Then I remain in my sector.***
112	**CO**	***Yes, yes.***
113	**Specialist**	***A, has it crashed on land or in the sea?***
114	**CO**	***(he gives the location)***
115	**Specialist**	***There are no survivors (?). Do we know such things?***
116	**CO**	***I do not know, I do not know. Don't know about these things.***
117	**Specialist**	***The TV is saying that it was hijacking?***
118	**CO**	***I do not know, I do not know.***
119	**Specialist**	***Ok.***
120	**CO**	***This is not in my preoccupation, at the time being. What I am interested in is to mobilize my units.***
121	**Specialist**	***Ok, right. If the helicopter is needed, the Super Puma is good to go.***
122	**CO**	***Ok, have a nice day.***
123	**Specialist**	***Ok bye.***

In the meantime, one of the control officers contacted one of the senior operations' commander on-site, to verify the resources the latter mobilized:

124	**Commander**	***Orders [EMAK commander]***
125	**CO**	***How many people are going on the site, Mr. […]***

126	**Commander**	***17***
127	**CO**	***Commander [?]***
128	**Commander**	***17, 17***
129	**CO**	***[…]***
130	**Commander**	***17 people are going on-site***

During one of the conversations the senior on-duty control officer had with the ambulance service, he was stunned when a male operator with an effeminate voice answered the phone. The CO addressed him adding both female and male suffixes to the nouns and the pronouns. At some point he also addressed him as "madam". In addition to this linguistically expressed confusion and whilst waiting to be connected to one of the managers in the ambulance service, he made insulting remarks about the sexuality of the operator. He shouted his comments to one of the dispatchers, unaware that in many occasions when the call is being put on hold, that doesn't necessarily mean that the voice of the person who is being put on hold is not heard by the one that puts him/ her on hold. At that precise moment the ambulance service operator picked up the line again only to hear the last few mockeries of the control officer. As soon as the CO realized the situation, he decided to address the operator as "colleague" in order to redeem himself. The operator diverted the phone call to his superintendent. The CO introduced himself as the "fire-officer of the CCC" even if he was one of the five fire-officers working in the CCC at the time. Similarly, the ambulance service's superintendent announced: "I am the vice president of the emergency health services." The rest of the conversation took place as follows:

131	**CO**	***As far as the body bags are concerned…***
132	**Manager**	***What about them?***
133	**CO**	***About the body bags. Can you provide them?***
134	**Manager**	***But, yes… who else [would]? Are you there yet?***
135	**CO**	***We are there. We are trying to reach the site.***
136	**Manager**	***Tell me, please, because I have 30 units on the way, how can I get them there sooner?***

When a police officer contacted the HFC CCC to ask about the number of the bodies retrieved from the crash-scene, his request was processed as follows: the police officer contacted a control operator. His call was then diverted to a junior control officer. The latter, not knowing the answer contacted the senior control officer who referred him to the control commander. The junior control officer called the commander, who replied to his question. Then the junior control officer contacted the police officer to provide him with the information he requested. Only then did the police officer inform him that he had already contacted the deputy chief fire-officer. Between the lieutenant commander of the control room and a senior control officer:

137	**CO**	***Yes commander (although he is the lieutenant commander)***
138	**LC**	***Is The Special Forces Unit calling in more people to assume duties?***
139	**CO**	***No, they didn't tell me anything like this.***
140	**LC**	***Call them to call more people in. To call people in. We need more people in.***
141	**CO**	***Yes, do we need seasonal employees?***
142	**LC**	***NOOOO!!! What's their business [involvement with the professionals]?***
143	**CO**	***Bye.***
144	**LC**	***Bye.***

Commenting about the forest fire that erupted because of the plane-crash, one of the senior control officers conversed with the lieutenant commander of the HFC control room:

145	**CO**	***I think it was caused by the kerosene.***
146	**LC**	***Bullshit. We went… they went to the gully, where the fire began to burn. And while we needed one cubic litre of water more [in order to put it out], the vehicle that was sent on-site to provide that water fell over the cliff. After that, no other vehicle could go through that place. And the first one runs out of water. And that***

		was the reason why the fire was out of control. And it took the fire planes a long time before they could take off and try to reach the fire from another side. As a result 300 square meters were destroyed. The media representations were good and everybody that spoke. Everything went well. These things are never going to go away. Every time something will happen that will make it go bad, what can we do?

During the emergency response, the on-duty operator of one of the fire stations involved in the response had a brief conversation with one of the senior fire-officers with regard to whether they had collected all the body-bags available in the fire station to transfer on the rescue-grounds. The following were the introductory lines in the brief discussion that followed. The conversation ended with a 2-minute and 11-second chat about their holidays, their activities during their vacation, their future vacation, gossip about those who were getting married and divorced, and the plane crash:

147	**SO**	***What is it you want… you black cat… you faggot… you asshole… you even crashed an airplane!***
148	**CO**	***It was meant to be.***
149	**SO**	***What was meant to be?***

Towards the end of the mobilization, one of the control officers contacted the operations' officer by the code name *Arma* so as to account for the appliances on-site. In order to show his efficiency in keeping track of the fire-engines and the rescue appliances during the pandemonium of the response, the latter added:

150	**CO**	***Eh! Like an old whore walking the streets!***

However, not all operations' units were accounted for. One of the senior operations' officers on the rescue-scene telephoned one of the control officers so as to find out where some of the units under his command were located:

151	**Ops' officer**	***Where the hell are they? The mother loses her child and the child loses its mother out here!***

During the rescue and recovery operations, control personnel had to deal with a number of other simultaneous emergencies, mostly forest fires, erupting in various parts of Greece. In one of those forest fires, an operations sub-officer in a southern province, responsible for fire-fighting operations, requested a water-bomber helicopter. The control officer was surprised when he realised that the sub-officer was unaware that that province had a helicopter at the local fire service's disposal and that the Athenian control room did not mediate the communication between the chopper and the operations' units on-site:

152	**CO**	***My God!***
153	**Sub-officer**	***Listen here I am just a sub-officer!***
154	**CO**	***That means that you shouldn't know…***
155	**Sub-officer**	***I have called my superintendent [overlapping]***
156	**CO**	***But you are in charge now. What does that mean? That you shouldn't know how to deal with this?***

In the meantime, one of the other control officers was dealing with a routine call. A military officer requested a fire-engine to be present in the landing of a military carrier in the barracks. So, the control officer contacted the nearest fire station to request a unit to this end:

157	**CO**	***An appliance to the Brown [the name of the base]***
158	**SO**	***Where?***
159	**CO**	***Brown.***
160	**SO**	***Brown?***
161	**CO**	***Brown in Red [the name of the area where the base is located]***
162	**SO**	***[While writing it down he dictates to himself] Brown…***

163	**CO**	***Isn't it in Red?***
164	**SO**	***Yes…***
165	**CO**	***Eh?***
166	**SO**	***Yes.***

An incident involving a gas leak alerted one of the control officers when he realized that the fire-fighters were not fully aware of how to manage the response. So, he commented:

167	**CO**	***Don't you light any Marlboros there! We should be careful, ok? When you get there, I want to talk to the officer in charge***

This remark referred to an incident that occurred on the 28th of June 2001, when a seasonal fire-fighter died when during refilling the fire-engine he was boarding, he put on his lighter near the fuel tank so as see if it was filled.

During a forest fire in a Greek island, a local politician called 1-9-9. The politician introduced himself and began to describe the situation. He provided directions using landmarks, which only the local people could understand. He was unaware that his call was diverted to the Athenian control room so he assumed that the person he spoke to was familiar with the location and the topology of the place. However the control officer had apparently not understood who he was talking to and kept on listening to the information provided without interrupting his communicator so as to clarify the situation. More than a minute passed before any of them realized that they had misunderstood each other. Towards the end of the conversation, the control officer commented that there was nothing they could do since they were attending the crash incident. After the conversation ended, this senior control officer appointed a junior officer to monitor the progress of the aforementioned forest fire. Yet when the commander contacted the senior control officer and requested about the progress of the response, the latter mentioned that the other officer was following the progress of the emergency response. However, the commander, who had apparently developed a negative disposition towards the junior officer, commented:

168	**CC**	**[Talking about the junior officer and addressing the senior control officer:]** ***He is incompetent […] he sleeps like a horse: standing on his four feet.***

The above conversation was followed by another one between the control commander and the senior control officer, who has previously diverted the politician's phone call to the commander:

169	**CC**	***Don't ever patch me through to a politician again, I am going to hung you upside down […] where did he know me from, eh? Have we ever had coffee together? […] he has been busting my balls.***

On a second telephone line, the operations' officer in charge of the fire-fighting operations requested additional fire-fighters to put out the fire. He communicated his request to the senior control officer, who spoke about it to the CCC lieutenant commander who decided with regard to the reinforcements. The senior control officer then called the operations' officer but was unable to reach him. In the meantime, the lieutenant control commander contacted the operations' officer. The senior control officer was not informed about this conduct so he called the lieutenant commander once more to request the whereabouts of the operations' officer. It was only then that the lieutenant commander informed him about the contact he had already had with the operations' officer.

These episodes illustrate the individual and collective performances of the fire-fighting personnel and the other first-responders during major and minor emergencies. They also show how multiple and simultaneous emergencies affect the performance of the organization-members. The conversations detailed above demonstrate the distortion in the communication conduct and the causes of this distortion that potentially hamper the decision-making process and the management of the emergencies at hand. The following two chapters provide an analysis of the five episodes described that serve as a basis for comparing the BFRSs and the LFB routines and practices.

CHAPTER 3

ROLE-SET AND EXPECTATIONS: THE INCIDENT COMMAND SYSTEM AND ITS PROTAGONISTS

A closer look at the five Hellenic cases helps us to understand the patterns emerging from the communication conduct, with an emphasis on the problematic conduct, of the HFC personnel during emergency, routine and set events. One way to shed light on the significance of the communication conduct is by applying the concept of the *role-set* that Merton introduced in *Social Theory and Social Structure* (1965). Merton offered a formalistic account with respect to the patterns of interaction in the social structure. His account reveals that a role is a performance and that it is in the performance that one understands how organizations operate (March and Simon 1993; Schulman et al. 2004; Mackenzie 2006). Roles and the role-set are diagnostic tools and the transcripts provided in the previous chapter illustrate how the process operates in action. Henceforth, I shall use the principles of the Incident Command System (ICS), as the matrix for the *role-set* developed by the fire and rescue organizations, primarily during emergency responses (Perry 2003: 152-153).

3.1. The new version of an old idea: The ICS as an emergency bureaucratic mechanism

The ICS is a set of guidelines developed in the 1970s by the U.S. forestry service to manage rapidly spreading wildfires across state borders. Such disaster management required a multi-jurisdictional and multi-agency response (Comfort 1994; Hardy and Phillips 1998). Prior to the introduction and the development of the ICS, agencies involved in responding to wildfires dealt with problems such as the different structure and practices of the organizations involved in the emergency response; the different objectives and terminology used by those agencies; the lack of reliable incident information; the increasing number of people reporting to one superintendent; the unclear lines of authority; the lack of structure for the coordination amongst the agencies involved in the response and the inadequate or incompatible communication channels (Litwak and Hylton 1962).

From the early 1980s onwards, both academic and non-academic commentators on the subject have emphasized the development of the ICS as an emergency management tool that systematizes the communicative interactions and the role-playing of responding organizations to emergencies and, hence, consolidates a structured authority in five areas: command, planning, operations, logistics and, finally, finance and administration (*ICS: All-Hazard Core Competencies* 2007). Simply put, the ISC is a set of "who" and "what" and their communication conduct on the incident-scene: who is in charge of what; with whom he/she communicates and how. The basic goals of the ICS are: clear communication and accountability. This organizing system is based on the principle of the organization-set introduced by Thompson (1967). Thompson expanded Merton's concept of the *role-set* developed between individual actors within organizations to the roles organizations undertake on a macro-level.

I chose to discuss the ICS as a matrix for analysis principally for four reasons: first, this system was developed to provide a command structure during emergency responses with clear line of authority for each actor involved. This clarity of role cannot but provide an ideal action planning where order is the main principal. Second, this matrix may be used as a common denominator to compare the actions of responders – Greeks, British, Germans, and Americans – because the British and the American first-responder organization have predominately emphasized the significance of the ICS as an emergency tool and use it systematically during major disasters. Third, it provides us with a tool to classify and analyse the large amount of data provided by the episodes examined. Finally, although it enables the comparison between the various FRSs, it is not a universal *blueprint* and, therefore, it cannot be regarded as a totally objective measure against which to evaluate performances. So, my empirical work also offers a critique of the ICS as a general code of practice.

The ICS was conceived and developed as an ideal tool. However, the basis of its conception proved rather problematic. Since the ICS was originally designed to facilitate the inter-agency cooperation on the incident-grounds, the ICS-designers assumed that each organization involved in the emergency response operated according to a set of rules governing its practices on the incident-grounds. The ICS-designers took into account these distinct practices so as to introduce an integrated practice according to the complexity and demands of the emergencies. Thus, the ICS became a pattern "of shared basic assumptions

[…] as it solved problems of external adaptation and internal integration" (Schein 2004: 17).

So the system is built on the assumption that organizations involved in emergency responses have a predetermined structure followed by the organization-members. Nonetheless, what the Hellenic episodes reveal is that there is a distance between what is proclaimed to be the formal practice of the organization and how the organization-members, that is the *agency,* actually behave. The HFC has yet to resolve issues such as the span of control, lines of authority, ineffective command structure, and lack of reliable incident information. The system-designers also expressed the certainty that because it is just guidelines, and therefore flexible, when implemented with professionalism, the emergency response may reach ideal standards. How accurate can these assumptions be and what are those elements in the organization's culture that may hamper the ideal conduct amongst the participant actors?

The analysis of these five episodes based on an *ideal* system depicts not only the on-scene practices but the off-scene organizational environment that leads to the actions taken on the incident-grounds. Interestingly, these guidelines apply in a completely different way to the BFRSs or the LFB, as we describe them in the following chapters and reveal the different rationale of these rather distinct bureaucracies examined. So, the ICS becomes a standardized on- and off-scene incident management tool that regulates the communicative interactions of the emergency participants and their tasks. Table 2 describes the incident command structure, the tasks each of the participant actors undertake and an assessment with regard to which of the tasks were performed during the five episodes examined. Table 3 shows who or which HFC department undertakes which task and whether the actors are located on- or off- the incident-grounds.

3.2. The ICS role-set: The case of the incident commander

There are certain expectations from each actor participating in emergency responses. Although the ICS simplifies the roles on-scene and the set of communicative interactions, in the Hellenic case the communication conduct amongst the participant actors in the

Table 2: The application of the ICS to the Hellenic episodes examined

ICS/ EPISODES			**A**	**B**	**C**	**D**	**E**
Incident commander		Provide unified command	F	F	F	F	F
		Establish immediate priorities of responders	S	F	F	F	F
		Manage resources effectively	F	F	F	F	F
		Set objectives	S	F	S	S	S
		Set strategy	S	F	S	S	S
		Set tactics	F	F	F	F	F
		Monitor progress	F	F	F	F	F
		Reprioritize	-	S	-	-	F
Command staff	Information officer	Disseminate information to media/ others	S	S	S	S	S
	Liaison officer	Coordinate activities between the IC, the HFC and other responders	S	S	S	S	S
	Safety officer	Develop safety plan on-scene	-	-	-	-	-
General staff	Operations	On-scene action	S	S	S	S	S
	Planning	Collecting/evaluating/disseminating incident information	S	S	S	F	F
	Logistics	Finance/administration/cost analysis	-	-	-	-	-

S: success (point addressed; yet occasionally inadequately);
F: failure (point not addressed);
-: point not necessary to be addressed or not addressed at that specific occasion.

Table 3: ICS actors: Titles and names; positions and settings

ICS/ Actors		**Titles and names**	**Positions and settings**
Incident commander		Kronos-12, Kronos 13, Kronos-14, Kronos-15, station commander, Ares.	On-scene
		Control administration/ control officers	Off-scene
Command staff	Information officer	Incident commander	On-scene
		Control	Off-scene
		Press office	Off-scene
	Liaison officer	Incident commander	On-scene
		Control	Off-scene
	Safety officer	THERE IS NO SAFETY OFFICER ON-SCENE	
General staff	Operations	Operations units	On-scene
	Planning	Control	Off-scene
	Logistics	Station operators	Off-scene
		Control	Off-scene

emergency responses is complex. Table 4 indicates the main the actors involved in the emergency responses in the episodes examined.

The IC is the individual who directs an emergency response. The role of the IC creates a set of expectations and presupposes certain patterns of action; for example, to position appliances on-scene, to instruct and coordinate the efforts of the responders, to relieve the operations' units from their duties, when the response is over. The ICS suggests that the IC ensures a unified command. He/she establishes the immediate priorities on-scene that is the safety of responders and civilians. Moreover, he/she decides the type and volume of resources that are necessary on the incident-grounds and manages them when they arrive on-site. The IC also sets the objectives, lays out the strategy and defines the tactics according to a predetermined action plan or the parameters of the emergency at hand. He/she monitors the progress of the response and reprioritise the objectives, if and when necessary. The IC may also assign these tasks to operations' officers, who should report back to him/ her.

This casting determines what the expectations from an incident commander are and define his – or her, which is a rather rare case in the HFC – authority on the incident-scene. The ICS sanctions the omnipotence of the incident commander on-scene as it suggests that the decisions are not made "by committee" as "time is of essence" (*National Response Team* 1997: 13). The ICS assumes that the incident commander is a well trained decision-maker or a charismatic leader. How unreal is this assumption on which the principles of the system are based? The following descriptions of how the ICs acted throughout the five episodes depict the Hellenic experience.

3.2.1. "What is it that you see over there?" (A, 99)

The IC is predominately a decision-maker. He/she has an overall image of the progress made on the different fronts of the emergency response and he/she constantly reviews the incident plan (Gasaway 2008). The evening of the response to the train collision (episode A), a unified command was not achieved. None of them had explicitly assumed the command of the incident.

Table 4: Categories of emergency actors

CATEGORIES OF EMERGENCY ACTORS	PARTICIPANT AGENCY	EPISODES				
		A	B	C	D	E
Control employees	Control operators	X	X	X	X	X
	Control dispatchers	X	X	X	X	X
	Control on-duty officers	X	X	X	X	X
	Control lieutenant commander	X	X	X	X	X
	Control commander	X	X	X	X	X
Operations personnel	Station telephone operators	X	X	X	X	X
	Station commanders	X	X	X	X	X
	Drivers of fire-engines	X	-	-	-	X
	Fire-fighters, members of the operations units	X	X	X	X	X
	Chief fire officer	X	X	X	X	X
	Deputy chief fire officer	X	X	X	X	X
	Ares	X	X	X	-	X
	Arma	X	X	X	-	X
	Kronos-14	-	-	-	-	X
	Kronos-15	X	X	X	X	X
	Special Forces personnel	X	-	-	-	X

Press office	Fire-fighters	X	X	X	X	X
Fire Investigation Unit		-	X	X	X	-
HFC Ambulance Service			X			X
Provincial fire stations	Operators			X		X
High-ranking officers from other departments	Random			X		X
	Purposeful				X	X
Secretariat General for Civil Protection		X	-	-	X	X
Military personnel		-	-	-	-	X
Police	Officers	X	-	-	-	X
	Operators	-	-	-	-	X
Ambulance Service		X	X	-	X	X
Electric Company		-	X	X	-	-
Gas Company		-	X	-	-	-
Hellenic Railway Organization	On-duty official	X	-	-	-	-
Hellenic Telecommunications Organization	Random operator	X	X	-	-	-
State representative		X	X	-	-	X
Civilians		X	X	X	X	X
Private conversations		X	X	X	X	X
Note: X marks the actors participating in each of the episodes examined						

Rather than monitoring the progress of the efforts made by the rescue units that were dispatched on-scene at least two of these officers were themselves involved in rescuing the engine-drivers who were trapped in the engine-coach. When contacted by one of the senior control officers (A, 95-103), none of had an overall image of the progress of the emergency response. At least two of them had to repeat ad hoc the control officer's question to the rest of the responders around them in order to provide an answer. The impromptu character of this process bears the risk of acquiring and providing inaccurate or unreliable information: "I am not sure about [whether it is a] collision [or not]" (A, 100). Although the immediate priority of an IC is to make sure that the responders working on the incident-grounds and the bystanders are safe, the senior officers on-site had neglected to appoint someone from the operations' units to ensure that civilians were safely removed from the collision-scene. At least one of the senior officers actively engaged in rescuing one of the trapped engine-drivers, and answered, when asked by a control officer whether the ambulances had arrived on site or not, that he was unaware of their arrival. The objective was to release those trapped in the derailed coaches and immediately offer them medical care. Nonetheless, the senior officer did not have an overall image of the response as he was personally engaged in it. He had failed to establish contact with the ambulance service and, thus, he did not know whether medical care could be instantly provided to the injured individual.

3.2.2. "What's going on out there? ... Who is that 'asshole'? … We are 'fucked'" (B, 78, 75, 76)

When the fire was initially reported to the control room, dispatchers mobilized Kronos-15, Nikolaou, to the firegrounds, as the IC. In turn, Nikolaou reached the scene before any of the fire-engines appeared on-site. The decisions he made the minute he exited his vehicle, hampered the emergency response until he was replaced by the higher-ranking commander of the fire-station that had jurisdiction over the area. Nikolaou should have waited for the appliances to arrive on the incident-grounds; however not for the reasons Papadopoulos suggested: a fire-officer "running around" with no equipment damaging the image of the fire service. Intentionally or unintentionally, Nikolaou cut off all communications with the control room when he entered the basement. The signal was too weak to allow him to receive or to make phone-calls. Moreover, he went in the basement without carrying a breathing apparatus, which allows fire-fighters to operate in an area affected with smoke.

Furthermore, Nikolaou was not carrying a portable fire-extinguisher that could have contributed to creating an escape-route for him, in case he was surrounded by fire. Therefore, he could have been injured or killed in case of a flashover that is the simultaneous ignition of all combustible material in an enclosed area. Nikolaou refused to communicate his assessment of the emergency via radio and requested that only a few fire-engines remained on-scene and the rest returned to their stations. It took Papadopoulos some effort to convince him to follow a standard operating procedure (B-33). Nikolaou's decision to re-dispatch the reinforcements back to their stations left very few fire-fighting personnel on the firegrounds. Moreover, when Nikolaou entered the basement, he did not appoint a fire-fighter that would liaise the operations' personnel to the control room and hence, virtually no one answered the radio transmissions.

So, the IC wrongly assessed the gravity of the situation. Thus, he failed to establish the objectives of the response, to set the strategy and the tactics of the fire-fighting operations to follow. He ordered the control room to re-dispatch the bulk of the appliances – they had by that time mobilized on the firegrounds – back to their stations. That decision jeopardized the safety of the fire-fighting personnel and the civilians on-site, the immediate priority of an IC. In order to avoid being reprimanded about his professional performance, he impeded the process of the disseminating incident information: first, by making himself unavailable to control officers, who were requesting an update on the progress of the response; second, by avoiding diffusing incident information via radio. His reactions cut off control employees from the emergency response (B, 31, 77) and led them to seek information from anybody else available to provide any kind of information, whether that individual was eligible to answer the control personnel's question or not (B, 32). Furthermore, the IC breached the principal of achieving a unified command. His failure to re-prioritize the gravity of the emergency led another junior operations' officer to make the decision with regard to requesting additional fire-engines on the firegrounds. But foremost, he lied about entering the basement in order to assess the emergency (B, 81-87). Thus, he deliberately misled control and operations' personnel and knowingly hampered the response.

In addition to the erroneous assessment of the emergency, the mismanagement of the resources and, eventually, the exposure of the lie broke the trust between control and operations' personnel and amongst operations' employees on the firegrounds. It is evident

that before a senior operations' officer was dispatched to the firegrounds, a junior officer circumvented the authority of Kronos-15 and requested the remobilization of the resources. The inability of Nikolaou to respond to the requirements of his statutory role and the expectations of the employees undermined his status as IC and led the on- and off-scene personnel to question his authority, which, in turn, resulted into the collapse of the command structure on the incident-grounds. When there are very few standard operating procedures or the existing procedures are, either deliberately or unintentionally, not followed on the incident-grounds, then operations' personnel rely on the competence of the incident manager to deal effectively with the emergency. If the HFC-employees cannot trust the IC, then the system breaks down (Crichton et al. 2005): junior officers assume control of the operations' units in sight or operations' units that are left on their own somewhere on-site and they start acting independently, as is also the case in the bulk of the major and minor incidents examined.

The IC is a symbolic figure. He/she is what the position he/she is assigned to dictates. In that position, he/she is expected to perform certain tasks. When he/she is unable to fulfil his duties, he/she is deprived of the prerogative the authority of his position offers him/her. He is no longer Kronos-15, he is Nikolaou. As Nikolaou, he is mistrusted and gradually degraded. His past career and his current actions are scrutinized. Eventually, he is marginalized and replaced (B, 34-53; 78-79). If the "greatest enemy of authority is contempt and the surest way to undermine it is laughter" (Lukes 1986: 65), Nikolaou was laughed at by the control employees when they replaced him, and the junior officer, when he disregarded his authority and ordered the re-mobilization.

Nikolaou was not debriefed. So HFC personnel failed to clearly identify what went wrong and why. Moreover, Nikolaou was not formally reprimanded for deliberately distorting the facts with regard to his actions on the firegrounds. A series of misjudgements occurred and the only attention this mismanagement attracted was the brief overall evaluation of Nikolaou's actions provided by the control commander (B, 81-87). Disciplinary procedures dictate that personnel who fail to fulfil their duties are liable to punishment. Nikolaou was neither formally reprimanded for the initial mismanagement of the response nor otherwise punished for intentionally distorting the facts. The HFC regulations were evidently circumvented.

The operations' officer who assumed Nikolaou's duties as the IC was the commander of the fire-station that had jurisdiction over the area where the fire erupted. Although he was operating in his area of jurisdiction, he asked for directions as to how to proceed on-scene (B, 54) and whilst on the firegrounds he cut off all communications when he announced his decision to enter the compromised building (55-56), as Nikolaou had done before him. As the station commander he should have known his area of jurisdiction; as the IC he should have made sure to secure communication with the operations' units. If Nikolaou was held accountable for the initial mismanagement, the second IC should have been held accountable for not knowing his area of jurisdiction and cutting off communications with the control or the operations' personnel on the firegrounds. Overall, the HFC chose not to hold the managers of the response accountable for their actions. Thus, the organization failed to learn from the mistakes of the organization-members.

3.2.3. "Is anybody listening to Ares?" (C, 134)

Ares is the commanding officer for the districts of Athens and Piraeus and assumes the role of the IC as the highest-ranking officer on the firegrounds. During that response, Ares realized that he was left with very few fire-engines that did not suffice to extinguish the rapidly spreading fire. He expressed a plea (C, 131) in a very distressed and irritated tone. That plea was transmitted via radio and addressed predominately to the control dispatchers.

As opposed to the IC's, the dispatcher who answered the radio transmission (C, 132) used a calm and formal tone. Despite the dispatcher's effort to appear calm, the repetitions of the word "replenishment" as a justification for the appliances being absent from the firegrounds, revealed his own anguish. The first mistake was made clear: all appliances appeared to be off-scene simultaneously. As the dispatcher continued the transmission, a slight irritation in his voice was detected (C, 133). The explanation he provided to the distressed IC was that the bulk of the fire-engines arrived on the firegrounds almost simultaneously. Thus, they went for replenishment at approximately the same time. Since no one assumed control of directing the appliances to different hydrants, they all lined up at the ones nearest to the fire-scene, at least two of which were reported to be out-of-order. Arma, the officer responsible for tracking and deploying the fire-engines, was on-site but

failed to identify the problem immediately. When the IC asked if "anybody" was listening to him, he stirred the dispatcher's emotional reaction. Under such pressure, the dispatcher made an effort to abnegate responsibility for the mismanagement of appliances and decided to circumvent the standard operating procedures (C, 135). He instructed via radio all available fire-fighting resources on-scene to report to Ares, not to Arma who was predominantly the officer in charge of managing the resources on-site. Ares (C, 136) pointed out the unnecessary circumvention of procedures and reinstated the authority Arma had over the management of the resources on the firegrounds. However, after pointing out this mismanagement, the IC initiated yet another incorrect process that could possibly breach the citywide coverage (C, 136). He ordered all the available appliances from the neighbouring fire-stations to be dispatched to the firegrounds.

Foolproof citywide coverage was at the verge of being breached due to temporary resource mismanagement. Control personnel are well aware that the city coverage cannot be compromised and that they, therefore, cannot give such order. However, in some of the cases examined, citywide coverage was jeopardized. When hierarchy creates fear and submissiveness, transgression of procedures is likely to occur. Violating SOP appears as one of the most significant weaknesses of the HFC. Transgression occurs as the result of higher-ranking personnel instigating a blame-game, transferring responsibility to lower-ranking personnel. Existing procedures serve to set the boundaries and the responsibilities of the roles of personnel on both the administrative and the operational level (Smith 1990). They also set barriers between what has been calculated or proven as *good practice* and what is perceived as *good practice* at the time of the emergency.

However, directly involved operations' personnel do not take into consideration how the pressure exercised on control employees may result in a compromising of organizational resources and a breaching of citywide coverage. When Ares contacted the control room again and asked for information, in order to facilitate his request but contrary to his role, the control deputy commander acted as a dispatcher. Occasionally, senior officers consider it beneath them to converse with fire-fighters or sub-officers, even if providing information to the operations' units is in the dispatchers' role description. As the emergency response progressed despite the latest order he had given the CCC that the appliances should be in contact with the control or the Arma, the IC started communicating with the appliances himself. Violating procedures on top of the already

circumvented ones created an environment of uncertainty as to how to proceed with regard to the mobilization and the monitoring of the appliances on-site.

Evidently *good practice* was not achieved. Emotionally charged communication instigated by the IC, due to a temporary lack of resources on-site, raised a request which breached SOP. Control personnel implicitly denied the request, providing, at the same time, the necessary explanations for the lack of appliances on the firegrounds. The IC rejected the explanation and reiterated the request. Complying with the request put forward, control personnel allowed the breaching first, of communication procedures between control and operations' units and, second, of citywide coverage. The unclear authority on the firegrounds resulted in lower-ranking personnel disobeying orders. At least one of the fire-engine drivers proceeded to the nearby hydrant without notifying the control. Another one disagreed with the alternative provided by the dispatchers: *"If it [the hydrant] is not working I will go to another."* Due to Arma's failure to effectively address the replenishment process and the CCC's inability to manage such a process from afar, the appliances started to communicate with one another about which hydrant was operable and provided the best water pressure. So the appliances proceeded to the hydrants suggested by other operations crews and the control, deprived of a clear mental picture as to the conduct on-site, was excluded from monitoring the whereabouts of the fire-engines.

Evidently, the urban infrastructure contributed to the mismanagement of the emergency response. Hydrants' operability was a highly problematic phenomenon. Allocation and operability of the hydrant network may be considered as a problematic inter- and intra-organizational issue. As far as the former is concerned, the allocation of hydrants and the inspection of their operation are vested in HFC personnel.[55] However, when requested the placements of hydrants in the locations designated by the HFC as well as the necessary repairs are undertaken by the Municipalities. Local Authorities are responsible for maintaining the urban infrastructure, i.e. streets, hydrants, draining systems, and any negligence in maintaining the infrastructure hinders first responders' operations. Scarcity of water supplies constitutes one repeatedly emerging obstacle to fire-fighting operations and jeopardizes the lives of the fire-fighting personnel on the incident-grounds. One of the first ICs on the firegrounds contacted the CCC to ask for "more water" (145-146). Both the

[55] Eggeklios (Service Order) 79, 'Area of installation and operation for the communications via radio', protocol no 5285, F702.7, 03/02/2006.

pattern of communication and the context reveal a controversy. The CCC cannot provide water as such. It can provide appliances and information concerning the allocation of the hydrants nearest to the incident-grounds. Furthermore, by the time the operations' fire-officer contacted the CCC, the appliances that could have been dispatched on-site were already there. Though some were either out of order or dysfunctional their crews had already been notified about where the hydrants were located. The operations' officer's hypothesis appears to have served as an excuse for not completing the emergency response sooner. The CCC officer who answered his call commented that the "Arma may have been informed about the whereabouts of the hydrants", so they should have had water sooner. "May" reveals an uncertainty, an assumption. Was Arma aware of the whereabouts of the hydrants or not? The CCC officer did not verify his assumption by requesting verification either by the dispatchers or from the Arma. Verification was in order, because there was a substantial distance between what should have been done and was done. It is the CCC task to provide all information available for the incident and it is the operations' units' duty to make use of the information. And it appears that when something goes wrong, the CCC blames the operations' personnel and vice versa. Nevertheless, operational mistakes are rarely assessed. The CCC had to receive another phone call from one of the drivers of a 12-tonne vehicle who stated first that a number of hydrants were either out of order or without sufficient pressure to speed up the procedures of the replenishment, and second that police presence was necessary in order to divert the traffic, so the fire-fighting vehicles could move more quickly from the hydrants on-site.

In addition, the intensity of the fire and the tension caused by the vast mobilization and the constant re-establishment of command may have created the impression that the hydrants were inoperable although they were in fact functional. At the end of the third emergency response, a fire-officer checked at least one of the hydrants reported "out of order" or dysfunctional only to discover that it was actually operating properly. When asked, his assumptions were that, during the emergency response the levels of stress caused by the intensity of the incident and the constant pressure deriving from the command structure hampered the fire-fighters' ability to operate calmly so as to achieve "a successful operational outcome."[56] Dysfunctional hydrants, along with the poorly managed mobilization of the appliances during all cases examined, emerged as an additional reason for breaching citywide coverage. Many of the Athenian or Piraeus fire stations engaged in

[56] Pers. comm., 5 May 2006.

emergency responses were operating with just their station commander. Although water storages have been created in areas that have been risk assessed[57], these storages are not adequately maintained. In reality, they are often inoperable. Moreover, although the inadequate water pressure of the hydrant system has been identified as a problematic phenomenon, it has not yet been addressed by the Municipalities.

Before Ares undertook the management of the incident, the first high-ranking officer on-site was automatically the IC. He delegated the authority of managing the appliances on their way to the incident-grounds to the control dispatchers (C, 118-129) or suggested that the police undertook the task of diverting the fire-engines from streets less congested. This constituted an irrational decision on his part. That was the starting point of the temporary mismanagement that affected the interaction between control and operations' employees and among operations' personnel. It was the same high-ranking officer who, a few hours into the response, made a decision that jeopardized the safety of the responders on-site: he ordered the entrance to the burning building although the roof appeared to be giving away (C, 139-140). The control officer did not object or discuss what appeared to be an irrational decision. "Good" (C, 141) was the control officer's reply to the operational tactics of the high-ranking officers.

During the extended emergency response, high-ranking officers were operating independently on the firegrounds. At least one high-ranking officer requested that control dispatchers send him additional resources. According to procedures, he should have made his request to the IC or the Arma who were in charge of monitoring the resources on the incident-grounds. This undetermined span of control, it affected the consistency of the authority on the firegrounds and, thus, the discipline of the operations' units.

3.2.4. "We've lost the ball" (D, 80)

Fire breaking out in a hotel, extreme weather conditions, demonstrations; distinct incidents require different ICs. Nevertheless, the deputy chief fire-officer appeared to be the IC on

[57] Service Order protocol number 5196, Φ. 702.1, 01/02/1999; Service Order protocol number 1476, Φ. 702.15, 09/03/2006.

both the demonstrations' scene and the hotel firegrounds. The fatality in the hotel increased the intensity of the emergency response. At the same time, on the demonstrations-front, the vandalisms increased. The police units retreated, leaving at least one fire-engine unguarded. The operations' unit contacted the control room in order to request immediate re-dispatching to a different and more secure location. The control officer who took the call commented that the deputy chief fire-officer who was directly responsible for managing the mobilization of the resources on the scene was involved in the hotel fire. The officer expressed his regrets for being unable to re-dispatch the unit but he had no authority to do so and he did not wish to *disturb* the deputy (D, 79). In this case, the centralization of the decision-making process along with the submissiveness of the lower-ranking fire-officers jeopardized the organizational resources on the incident-grounds.

On a third front, the spate of phenomena increased the workload of the control room. Control employees, and especially control dispatchers, become the IC and undertake the responsibility of distributing the resources in the areas affected by the bad weather conditions. To this end, they prioritized the calls according to the type of incidents reported by civilians, and appointed specific appliances to respond to specific incidents. Usually, fire-engines attend to draining water from the lower parts of public and private buildings, cutting down trees or removing debris from public places. Nonetheless, in at least one case, a station commander instructed one of the appliances to proceed to a different incident than the one the operations' units was assigned by control personnel. The reason provided for such interference was to accommodate an acquaintance of the station commander. The records show that this individual was already on the CCC's list of incidents, interference of such sort only delayed the progress of the appliances responding to those otherwise minor incidents (D, 27-36, 52-69). The commander who interfered with the task management arranged by the control, appeared reluctant to disclose his interference (D, 32; 34; 35). His elliptic utterances and the constant repetitions emphasize his reluctance.

On the hotel firegrounds, before the deputy chief fire-officer assumed control, was Kronos-15. The IC Kronos-15 left his mobile with his driver, who was unable to accurately reply to any of the questions control officers asked him. He had to loudly count the floors of the hotel in order to answer the control officer who called Kronos-15 mobile. Although fire-fighters driving appliances are instructed to communicate any necessary information between the control and the operations' personnel, those fire-fighters who drive the

transport vehicles of the high-ranking operations' officers are not usually instructed to follow the progress of the response so as to be eligible to diffuse the necessary incident information to and from the incident-grounds. Furthermore, when the control commander called Kronos-15 mobile he expressed no intention of passing information on to the IC's driver, a fire-fighter. This phenomenon may occasionally become an obstacle to diffusing incident information. Some high-ranking officers refuse to accept or provide assistance from or to lower-ranking personnel, as was also the case in episode C.

Centralization of command and *unified command* are not synonymous. Unified command was breached when the deputy chief fire-officer assumed command of two distinct incidents. The HFC regulations sanction the centralization of the decision-making process regardless of the nature and the number of emergencies. The IC may be proficient to deal with more than one incident responses. Nonetheless, there are other parameters in the HFC culture that may impede the aforementioned process. When the operations' unit from the demonstrations-front contacted the control in order to be immediately re-dispatched due to the imminent vandalism in the area, the senior control officer refused to interrupt the deputy chief as long as he was involved in the hotel fire. In the first case, the deputy chief jeopardized the management of the second front he was in charge of. He should have delegated his authority to another operations' officer or to the control. In the second case, the mistake was made by the control officer. It is often the case in the HFC that, when a lower-ranking officer takes initiatives that may positively contribute to the effective management of an emergency response but are not sanctioned by higher-ranking officers, then the lower-ranking officer may be relocated or refused promotion. Therefore, lower-ranking officers avoid such actions that may jeopardize their advancement in the organization.

Inadequate and unverified incident information presented an additional obstacle to the decision-making process during the emergency response (D, 3; 7-11). This was followed by a deliberate interruption of the communications between operations and control. The IC did not make provisions to establish minimum communication with the control. At least half an hour into the response, the control employees were unaware of the name of the hotel on fire.

3.2.5. "Every single time something will go wrong" (E, 146)

The incident management in the control room indicated that no action plan was implemented by the administration of the control despite the fact that since 1947 twenty deadly aviation accidents occurred in the Hellenic territory, seven of which were in or near the city of Athens.[58]

The announcement of a potential accident almost an hour before the plane crashed revealed that there was no strategy as to how to deal with aviation accidents. The on-duty control officers were improvising while the emergency was unfolding (E, 56-63). For the first hour after the crash was reported, at least two of the on-duty control officers were involved in locating and accumulating bodybags from the Athenian fire-stations. This was an unnecessary task for control personnel. The ambulance service was responsible for providing the bodybags (E, 134). Nonetheless, after the conversation with the senior manager of the ambulance service (E, 131-136), in an effort to establish the HFC premiership as a first-responder organization on the crash-scene at least one officer was instructed by the administration of the control room to keep on collecting bodybags from the fire-stations.

In the meantime, incidents were erupting throughout Greece. On-duty control officers realised that they were unable to monitor the progress of the multiple emergency responses unless each control officer followed the progress of a set number of incidents. However, the administration of the CCC implicitly obstructed this task management (E, 168). Favouritism became an obstacle to evenly distributing the tasks performed by control officers despite the workload of the control personnel: "You've trusted him to monitor the progress of the response? He is incompetent. He sleeps like a horse […]" (E, 168). *Trust* became the pretext of favouritism. The officer was not trusted; thus, he was not appreciated. The employee became conscious with regard to the disposition of the control administration towards him. As a result he made a constant effort to establish trust. He repeated verbatim the information about the potential crash in order to avoid falsifying the content of the information he was given by the fire-fighter employed at the airport fire-

[58] http://www.airdisaster.com/photos/5b-dby/photo.shtml, accessed: 12/02/2007; http://www.ntsb.gov/NTSB/GenPDF.asp?id=DCA05RA092andrpt=fa, accessed: 12/02/2007.

station (36); he interrupted his conversation with the PO employee to ask his superordinate whether the information he had given him earlier was the same information his superordinate received directly from the control tower (E, 45).

As a result of favouritism, the span of control became wide and every control officer was eventually involved in monitoring the progress of every emergency reported to the control room. The monitoring of the emergency responses became even more complicated due to the fact that different control officers were receiving fragments of the information concerning an incident. These fragments were only gradually brought together in order to provide an overall picture of the progress of the emergency response. The environment in which this set of unruly conduct took place was further aggravated by the bullying of the employees (E, 168-169).

Particularism also obstructed personnel management on the incident-grounds. It was made clear from the beginning of the operations that the on-duty HFC personnel did not suffice to respond to the incident-grounds and provide citywide coverage at the same time. One of the on-duty control officers suggested that they could engage the seasonal employees either in the response or in providing citywide coverage (137-144). Seasonal employees are individuals employed on a temporary basis for no more than five months per year, from the 1st of May until the 31st of October. They amount to 1/3 of the organization's personnel capability. Seasonal employees assist the professional fire-fighters with the "unforeseen urgently emerging and transient in nature needs of the HFC",[59] as they participate principally in forest fire-fighting operations. Nonetheless, they receive minimal training. Their essential personal equipment is provided with delay. At least once, seasonal employees were provided with their personal equipment after the period for which they were hired to work in the HFC (*Rizospastis* 31/01/2008). This occurred following the 2007 forest fires in which 75 people were killed. In the HFC, seasonal employees are not considered by their professional counterparts "well trained, knowledgeable, physically and mentally fit professional fire-fighters" (*Tipos tis Kiriakis* 24/07/05) eligible to participate in fire and rescue operations. This symbolic invention operates by creating spheres of inclusion and exclusion based on what are marketed as intrinsic characteristics of organizational members that others do not have or cannot acquire. The exclusion of

[59] Presidential Decree 123/ 2003, Government Gazette no 108/ 8 May 2003: 1668.

seasonal employees is sanctioned by the terms of their contracts. Seasonal employees are not allowed to conduct night shifts or do overtime. Therefore, when employed in fire-fighting and rescue operations, ICs and control personnel need to make provisions to relieve them of their duties without breaking the conditions of their employment contracts. Therefore the institution of seasonal employees in the HFC is considered "incompatible" with its principal objective of "securing the lives and properties of the civilian population" (*Tipos tis Kiriakis* 24/07/05: 74). Thus, the administration of the control room firmly and positively ruled out their involvement either in the response or by replacing the professional fire-fighters who were involved in the emergency in the fire-station.

During the Helios response the preferential treatment provided to lower-ranking personnel with expertise revealed that particularism breached the safety of the responders on-site and one of the primary objectives of the 'ideal type' of bureaucracy, impersonality. At least one of the operations' officers specialized in aircrafts was inadequately consulted (E, 96-100; 105; 108-123). Specialists are individuals employed by the HFC as fire-officers so as to address emerging operational or administrative needs such as forest or chemical fire-fighting or organizational finances and logistics.

The specialist who was appointed to supervise a sector that was not affected by the crash asked to be reassigned to the crash-site. However, permission was not granted. There were three impediments to bringing this about: first, the fact that there were no SOP. Thus, it was at the discretion of the IC to decide on the engagement of the specialist. Second, the specialist was already assigned to another sector. Hence, replacing and reassigning this officer may have increased the workload of the CCC officers. Third, HFC employees maintained that in the past, this specialist had undermined the authority of higher-ranking officers and, often, circumvented the command structure.[60] During the conversation between the specialist and the on-duty control officer, the expert addressed the higher-ranking control officer by his first name instead of the customary use of the surname or the positional title (E, 96-100). He also employed the imperative mode (E, 109) to prompt their conversation. The imperative mode introduces an abrupt sequence of requests and replies and it is therefore usually used by high-ranking officers when their orders must be executed forthwith by lower-ranking personnel. That is why dispatchers use the imperative

[60] Fire-officer, pers. comm., 28 April 2006.

mode with stations operators. In order to counterbalance the abruptness of the imperative mode, those who use it usually resort to adding: “please”, “pal” or “friend”. This was not the case with the expert. The specialist further undermined the control officer’s authority by demanding to be re-assigned to the crash-scene rather than suggesting it. In contrast, the control officer addressed the specialist in plural. Although “expert and bureaucratic authority” (Salaman 1980: 59) are not incompatible, under the aforementioned circumstances, “the expert, it seems, [cannot] win the complete trust and acceptance of his company’s highest authorities and tends to be kept at arm’s length from the vault of power” (Gouldner 1964: 225), even when responders’ lives are at stake. Thus, organizations intentionally fail “to retain the valuable individual capabilities for which its employees were recruited, and maintain specialist sub-units with specialist knowledge of the world necessary for organization’s survival” where they “must” have succeeded (Turner 1976: 136). “What does specialization have to do with this? No; and that’s final! Bye” (E, 104). This reply-statement made by the control administration raises a question: what does “this” mean? Does “this” refer to the noun “specialization” (E, 103), to the response or to the overall disposition towards the behaviour of the expert?

When questions such as whether the wings of the plane contain uranium or not are raised, *specialization has everything to do with this*. It is not merely a matter of “trust”, as Gouldner introduces it, whether the specialist is included or excluded from the decision-making process. The opinion of this specialist did matter and that is why the specialist was eventually asked to confirm the information. It is more of a matter of transgression of authority. This issue was not only detected by the control lieutenant commander who strongly refused the specialist’s involvement. It was also raised by one of senior operations’ officers, who received the information with regard to the possibility that the wings contained uranium by another expert, specialized in chemistry. The operations’ officer made the irrational request not to call the specialist to verify this information. If the specialist had indeed been reassigned on-site, the operations’ officer would have had to cooperate with his colleague. In order to avoid such encounter, he consciously made a choice that could have impacted on the safety of personnel working on-site. When the specialist was contacted to verify the information, he began to reply by emphasising his unique status within the organization. He continued by indicating how the control administration should have decided on his involvement in the response and how he was marginalized in a “sector” with very little to do. Then, he disregarded and discounted the expert who raised the issue with regard to the wings containing uranium. He continued

with reintroducing the issue of his involvement arguing that it was “MY job.” Then he commented on the frequency of this kind of accidents occurring and the possibility of something similar ever happening again during his career. Finally, he informed the control officer about the status of the individual he would contact in order to verify the information.

In such crises, a direct answer would have been less time-consuming and, therefore, more helpful. However, neither the control administration nor the expert showed any interest in acting as part of a team with specific objectives, strategy and tactics. The expert’s monologue revealed that he was merely interested in establishing his own status rather than offering an answer to an important question. He was criticising the decisions made and undermined the authority of those who made them. Eventually, he complied with the decision endorsed by the HFC chief-fire-officer. However, in a final effort to indirectly engage in the process, before complying with the decision, he asked for details with regard to the crash (E, 113-123).

During the response, very little information was diffused to the control personnel. Information was exchanged on the higher echelons of the command structure. As a result the lower-ranking officers were unable to assist representatives from other responder-organizations. They had to reach the higher-ranking officer and then re-contact the representatives. In this sequence of communication conduct none of the communicators informed the other about what was taking place. Therefore they were engaged in a time-consuming process which indicated: first, that significant incident-information is not shared at least amongst those employees who may use it. Second, it revealed that there is no predetermined span-of-control: all actors involved may contact all other actors engaged in the response. Finally, it raised the issue of secrecy: why did not the police officer inform the control officer that he would contact the control administration to get hold of the information he wanted? The control employee would have probably prevented the police officer from contacting the control administration, as it was his duty to inform the police officer.

Simultaneous incidents across Greece indicated that issues such as unified command, span-of-control, effective resource management obstructed the emergency responses. At least

one emergency response launched to deal with a rapidly spreading forest fire was hampered by an inexperienced sub-officer who assumed the duties of the IC with very little knowledge of the command system and the fire-fighting resources at his disposal (E, 152-156). When the control officer who was monitoring the progress of the response realized the ignorance of the IC, he exclaimed with surprise. Yet, this is not an infrequent phenomenon in the HFC; neither is how the employee tried to justify his ignorance with regard to managing an emergency response: "I am just a sub-officer" (153). He abnegated his responsibility with insolence: "look here […]". His attitude resulted from the habitual centralization of authority. It is the fire-officers, and not sub-officers, who are allowed to predominately manage emergency responses. They are the ones to receive training, when training is offered. The role of the rest of the personnel is underplayed. They are considered as "soldiers who receive orders and execute them."[61] Thus, the administration of the organization deprives the bulk of organization-members to access the knowledge resources via formal or on-the-job training. When lower-ranking personnel are deprived access in the learning process, they gradually express their exclusion by being indifferent and abnegating any responsibility predominantly attributed to higher-ranking employees. The ultimate lack of auditing personnel performance results into perpetuating phenomena such as indifference or negligence and, therefore, further mismanagement of emergencies.

Occasionally, control administration recapitulates the events and reflects on the management of the response, after the operations are over or nearly over (episode B). A brief reflection replaces a formal debriefing. During this reflection period, the employees involved negotiate the distance between theory and practice. The control administration acknowledges the details of the failures on the incident-grounds. In two of the cases examined (B, 81-87; E, 145-146) the control administration instigates the conversation by criticising the operational conduct. In the first acknowledgement, the lieutenant commander blamed all actors involved in the response (B, 81). In the latter, he distanced control personnel from the mismanagement of the operations' units (E, 146). He corrected the initial *"we"* that included at least the actors engaged in the conversation, with the pronoun *"they"*. In this second reflection, the anger of the control administration became more explicit as the lieutenant commander used foul language to criticise the response. These acknowledgements – that sounded like confessions on the recorded material – stirred by either remorse (B) or anger (E), counterbalance the lack of formal audits. Problematic

[61] Fire-officer, pers. comm., 8 May 2006.

conduct is informally, temporarily and secretly recognized and documented. Ostensibly, the burden of those actors who identified the misconduct is released. The purpose of the reflection is served. To learn from the event so as to lessen the likelihood of recurring misconduct during an emergency response is evidently not an objective. So, post-emergency, performance and preparedness are underplayed (Balamir 2002).

3.3. Conclusion: The domino effect – How ICs affect the actions of the operations' personnel

The IC's actions on the incident-grounds evidently define those of the rest of the emergency personnel. The IC has authority over the emergency response that derives him from his statutory role as a fire-officer (Crane 2005). When the IC fails to respond to the expectations of his role in the command structure, his authority is questioned by both high- and low-ranking personnel and his status is diminished. Personnel mistrust him, criticise him and disobey his orders. They identify the individual with the position. Thus, they become suspicious of his successor and the mistrust is extended to the legitimacy of the post rather than the person. The meaning of discipline is eradicated and unruliness governs the response until the incident command is assumed by a different individual who will prove his/her efficiency (Kostaras and Schuh 1990). In the meantime, personnel and appliances on the incident-grounds begin to self-dispatch, each according to their own evaluation of the emergency. If the IC delegates his authorities to other officers on-site, he succeeds in clearly defining the span-of-control, monitoring the mobility of the resources and attributing accountability.

These episodes indicate that when authorities are centralized and not delegated, personnel undertake the least of responsibilities on the incident-grounds and attribute accountability for operational misconduct to the individual who has the overall command of the incident. ICs rarely delegate their authority to the rest of the employees involved in the response either because they mistrust personnel or because they reckon that undertaking the responsibility to manage all aspects of the mobilization process provides them with a better understanding of the conduct on the incident-scene.[62] Often, according to this rationale, the

[62] Fire-fighting personnel, pers. comm., 28 April-8 May 2006.

ICs are personally involved in handling the lines (water-pipes) on the firegrounds or entering the debris to rescue or recover a trapped individual. Nonetheless, their personal involvement hampers the overall perception they have about the incident (Turner 1978). Occasionally, as was the case with the expert officer or the seasonal employees when the IC exhibits a favourable disposition towards some of the personnel then he breaches one of the main principles of *ideal* bureaucracy: impersonality and, thus, impartiality.

The IC is also the key actor in initiating and sustaining communication among operations' personnel and between the control employees and the operations' personnel. When he deliberately or unintentionally disrupts these communication processes, he allows unverified or fragmented information to affect the response. Unverified or very little information creates uncertainty with regard to the progress of the response and forces the participant actors to engage in superfluous communication conduct. Thus, it diverts the attention of the actors from managing the actual emergency conduct to dealing with the affects of the misconduct.

The information acquires a symbolic power: it empowers its beholder. Moreover, information is attributed different value when exchanged among fire-fighters, or between fire-fighters and junior fire-officers, among senior fire-officers, or between junior and senior fire-officers. In *horizontal communication* (McQuail and Windahl 1981), that is communicative interactions amongst individuals of the same rank, information is diffused rather unhampered. However, in *vertical communication* the dissemination of information becomes rather problematic. When directed upwards, either fire-fighters to junior officers or junior to senior fire-officers, information appears to be communicated unhampered. Downwards diffusion of information, on the contrary, seldom occurs as senior fire-officers do not communicate information to lower-ranking personnel. Moreover, formal language appears to be used in two occasions during the information transaction: first, when senior are talking to junior fire-officers depending on whether the former intend to keep the symbolic distance between them and the latter; and second, when junior officers address senior ones.

Overall, the attention to the status of the organization-members impedes communication processes as it raises obstacles to the disseminating of essential information. The process of

dissemination is consciously disrupted by senior fire-officers. As indicated above, it is not unusual for higher-ranking officers of the HFC to regard themselves as omnipotent and omniscient organization-members, rather than actors assigned to perform a certain task as part of the overall emergency command structure. The transgression of the boundaries of the roles organization-members assume, or should assume, during emergency responses, along with non-existent SOP, transfer the overall control of an emergency response to the highest-ranking officer on-site. The empowerment and the *absolute, unchallenged and unlimited authority* of the highest-ranking officer in an autocratic organization (Gouldner 1952) may prove problematic (Winsor 1996). The outcome of an emergency response is reduced to training, the experience, the management skills and style (McIntyre and Salas 1995), the ideals (McConnell and Drennan, 2006) and attributes, such as the ability to stay calm in a crisis, and personality variables such as willingness to take a leadership role, emotional stability, self-confidence, and self-awareness (Flin 1996) of the IC. However, the IC may lack some or most of these skills and attributes. In such case, the symbolic power of the higher-ranking personnel takes on a material character and the actions of the higher-ranking officers are sanctioned by the official hierarchy of the organization (Perrow 1976; Manning 1992). As a result, in both administration and operations, two implications emerge: first, the span of control, as a significant parameter in task management, becomes uncertain and undetermined under the authority of the omnipotent commander. Second, the senior officers as decision-makers make decisions which they fail to implement.

CHAPTER 4

THE ICS ROLE-SET: THE COMMAND AND THE GENERAL STAFF

As I have already indicated, the incident commander (IC) is the corner-stone of the incident command system (ICS). I have also pointed out that disruptions in disseminating incident information, lack of coordination on the incident-grounds and failure to assure the safety of the responders on the incident-grounds contribute to jeopardizing the well-being of the responders and consequently the overall outcome of the response. Thus, it is essential for the IC to be supported by three other actors: the information, liaison and safety officers. This chapter will examine the roles and responsibilities of these three actors.

4.1. The command staff

In this first section, I will address the roles of the press office, the liaison officer and the security officer. The press office personnel diffuse organizational and incident information to the public. The liaison officer makes sure that the first-responder organizations effectively coordinate their actions on-scene and the security officer ensures that all the precautionary safety measures are in place.

4.1.1. Securing the diffusion of the incident information

The information officer is responsible for the diffusion of incident information amongst HFC employees, between HFC employees and other first-responder organizations and other agencies involved in the response as well as the media. The role of the *gatekeeper* of incident information is undertaken by more than one individual. In order to ensure the flow of information amongst HFC employees and between HFC employees and other responder-organizations, one should examine how information is initially received, interpreted, assessed, forwarded and registered. The information exchange process

indicates the ability of HFC employees to handle the information so as to coordinate their own actions as well as those of other responder-organizations on the incident-grounds.

In intra-organizational communication, the role of the information officer is undertaken by the control employees. They accumulate, register and display incident and organizational information, e.g. the type and location of the incident as well as the status of the organizational resources and the progress of the response. When other responder-organizations are involved in emergency responses, the task of informing them is assumed by both control employees and operations' officers. Control employees initially inform them about the type and location of the incident; operations' officers coordinate their efforts on the incident-grounds. The media are informed by the press office (PO).

a. The role of the PO

The PO undertakes the role of disseminating incident information to the media, civilians and other organizations. Prior to 2001, this role was shared between control employees located in a northern suburb of Athens and personnel employed in the public relations office (PR) administered by the HFC headquarters and located in the centre of the city. The different administrative authorities and the spatial dispersion of the HFC employees engaged in the same task hampered the development of a common strategy. When journalists contacted either the control centre or the PR office, unless they requested by name one of the on-duty employees, they received information from the individual who picked up the receiver. Depending on whether HFC employees were updated, they would provide some information concerning the incident. There was very little consistency in the content of the information diffused to the media. Nobody was explicitly assigned to deal with and, thus, monitor, such communication. Furthermore, the PR employees, located elsewhere, were informed about the progress of the emergency responses via telephone. The communication between the control and the PR personnel was neither continuous nor consistent. Thus, the content of the information they provided to the journalists was, occasionally, outdated.

In 2001, the chief fire-officer at the time decided to put together an office that would exclusively handle the communication between the HFC and the media. This office was administered by the headquarters and located in the same building as the control room. The initial thought was that, if spatial dispersion was eliminated, then the flow of information between the PO and the control would be continuous and consistent. The spatial dispersion was eliminated, and new communication techniques that served the HFC interactions with the media were developed. Nonetheless, the HFC administration did not introduce any standard operating procedures and, therefore, the practices between the control and the PO remained unclear. Despite the fact that the PO was officially administered by the headquarters, as soon as the PO occupied the first floor of the building which traditionally belonged to the CCC, the control officers were under the impression that they could interfere with the conduct between the PO and the media.

The PR employees, who staffed the PO, objected first to their being transferred to a different location and second, to the newly issued guidelines on how to communicate with the media. Over the years, they had developed a certain pattern of communication that they were not willing to discard. New recruits were sought but very few remained for longer than three months in the beginning of the press office's operation. As a result, training was taking place constantly. Moreover, the control employees found it difficult to relate to the temporary PO staff. The austere and rigid formal relationships between control and PO personnel could not develop into the familiar, relaxed and comfortable informal contacts that HFC employees prefer. In addition, the re-location of this branch of the PR office estranged the control employees who viewed the newly set-up PO as a threat to their popularity with the media (Castells 2007), that is, as a threat to a part of their role in emergency responses. Thus, they imposed a silent information embargo upon the PO. The embargo raised conflicts between PO and control as well as between PO and the media. Journalists who were dissatisfied with the service provided by the PO chose to contact the CCC instead of the press office. The provisional, informal operation of the PO continued for more than a year. According to the service orders at the time**,** the control was still responsible for managing the flow of information to the media. Yet, depending on the interpersonal relationships cultivated between the PO and the control employees, the embargo was occasionally raised.

b. The *quid pro quo* information dissemination policy

PO employees have four sources of information to use in their communication with the media. PO employees listen to the radio transmissions amongst HFC operations' units in order to acquire different information with regard to the type of incident, the number of resources, the progress of the mobilization etc. When essential incident information is communicated via telephone rather than via radio, PO employees lack the overall image of the operational conduct. Control officers are expected to forward any information acquired via telephone to the PO personnel. It is usually the officers who undertake the task of liaising with the PO employees as the gatekeepers of the incident information. Yet, it is not specified which officer undertakes this task in each shift. They contact the PO randomly and, thus, officers conveniently rely on the assumption that someone else has contacted the PO before them. Moreover control operators from the peripheral control centres throughout Greece are obliged to contact the PO either by fax or by telephone about all incidents erupting in their districts. Finally, PO personnel contact the higher-ranking officers on the incident-grounds when they require details about the progress of the response.

Nonetheless, the flow of information is neither constant nor consistent between the PO employees and their information sources unless the PO engages in continuously contacting the control and the operations' personnel in order to be brought up-to-date. Even in this case, diffusing information to the PO is the outcome of negotiations between control and PO personnel. In episode E we listen to the conversation between a PO employee (Giorgos) and a control officer (Yannis) (40-45). Giorgos asked Yannis whether everything was "fine" before introducing his main request whether "we have something" at the airport (40). The first request and the use of "we" revealed that Giorgos expected Yannis to inform him if an incident had occurred.

The second successive request regarded the verification of the information Giorgos received. Yannis's answer indicated that although he was expected to inform the PO with regard to an emergency, a "serious" (41) one, he failed to fulfil a part of his role. Yannis was uncertain whether such "rather serious" information should be communicated to the PO. So, he tried to buy some time (41) in order to contemplate whether to forward the

information or not and began to negotiate with Giorgos (43). When he did not reach a decision, he delegated the responsibility of replying to Giorgos's request to his superintendent: "Should I tell […]" (45). And so he repeated the information almost verbatim. But Giorgos misunderstood the information Yannis gave him. When Yannis repeated the information, the fire-fighter forwarded to him earlier that morning, he reproduced the same circumstances that made him struggle when he tried to understand what the fire-fighter was telling him. So, when he gave the same information to Giorgos he did not provide a wider context for the PO employee to comprehend the details. Giorgos understood that the plane had crashed. Yet, if the plane had crashed, Giorgos would have heard it on the radio, and would have suspected that a large mobilization was taking place. A few minutes after their first conversation, Giorgos contacted Yannis again (46-52). Yannis was rather surprised by Giorgos's misunderstanding of the information so he clarified the situation. But Giorgos missed the important information that military aircrafts were flying next to the commuter plane (49). Yannis tried to clarify yet at least another point (51) when he was abruptly interrupted by Giorgos, who claimed that he had "got it" (50).

The third time Giorgos called (53), Yannis was very irritated both by the abrupt interruption and the negligence Giorgos displayed throughout the second and third calls. As a reply to his question, Giorgos received more information that he anticipated. This amount of information was not clearly contextualized and, thus, he was unable to process it. Moreover, Giorgos was engaged in communicating with at least two individuals almost simultaneously. His attention was, therefore, divided, and he missed some of the information communicated to him. What he lacked in attention, he made up in tacit knowledge. When there is a discussion among HFC employees about aircrafts, it usually regards water-bombing vessels. So Giorgos falsely assumed that the aircrafts Yannis referred to were water-bombers. In a rush to respond to the media, Giorgos missed the overall picture of the potential emergency.

PO effectiveness largely depends on the control's cooperation. The PO's dependency empowers the control room. Control employees express their power over the PO in various ways. During episode D, control personnel refused to reply the PO employee's questions with regard to the progress of the mobilization in the different fronts (D, 22-23). Nonetheless, the control employee did not merely refuse to give to the PO. The former

mocked the latter by repeating verbatim his question (D, 23) and by providing him with a self-evident and, therefore, useless assessment of the incidents: “mayhem.” During at least three of the episodes examine (A, C, E), control officers instructed PO personnel to go upstairs, observe the control personnel’s conduct and listen to the telephone conversations in order to accumulate incident information as the officers claimed that they had very little time to inform the PO personnel. However, due to the fact that there are usually two fire-fighters employed in the PO responding to five telephone lines, if one of them goes upstairs to “observe” the other is unable to deal with communicating with more than one line at a time. The PO employees, usually lower-ranking personnel, comply with the instructions of the control officers. Their refusal to comply would disrupt the flow of information and constitute an act of insubordination.

Episode B reveals that there is an additional reason why control officers avoid communicating information to the PO. Usually, the highest-ranking officers on the incident-grounds generously share information with the PO. Occasionally and despite being lower-ranking personnel, PO employees acquire more information than control officers. When the district commander reached the “Square Tower” (episode B), one of the control officers suggested operating the sprinkler system. Yet, rather than operating the automatic fire-extinguishing system the commanding officer was more interested in whether the PO had contacted the media. The control officer was unaware whether the PO had been informed about the progress of the response.

The control personnel’s experience in communicating with the media as well as their eight year experience in cooperating with the PO, allow them to know what information the media are usually interested in and, thus, the kind of information the PO seeks. Nonetheless, they often provide different information to that requested. For example, at least two episodes (A, C) indicate that when PO employees requested the number of the appliances on the incident-grounds, control dispatchers began to loudly numerate the license plates of the fire-engines and occasionally mentioning the type (i.e. A, 21-29). The dispatcher took his time when answering the PO’s question. Nine successive requests and replies (A, 21-29) indicated that the dispatcher was dawdling. During episode A (44-50), the dispatcher’s elliptic utterance (44) revealed that the PO failed to comprehend that the number 20 referred to the amount of appliances on-site. Ellipses are a time-saving linguistic trope of referring to objects or situations absent from the actual settings of the

discussion between at least two communicators. Nonetheless, what may be perceived as self-evident by the communicator who uses elliptic utterances may not be equally self-evident to the receiver of the information and may, therefore, result in misunderstanding the content of the information (E, 40-53).

c. A brief overview of the diffusion of the incident information

The flow of incident information is often deliberately obstructed by the control employees. Information appears to empower those who attain it. After the approximately six thousand forest fires that erupted in Greece in 2007 and destroyed almost 269.000 hectares of forest land and tillage[63] the control administration granted the PO permission to access part of the software system control employees use to register the information. PO personnel were allowed to view the table that displayed the forest incidents across Greece: where the forest fires erupted, when, the resources engaged in the response and the progress of the response classified as ongoing, contained, under control, extinguished. Nonetheless, the control administration denied the PO personnel access to view the table that displayed the urban incident in progress. If access was granted, the PO employees would have minimized their communicative interactions with the control officers and, thus, their immediate dependency upon them. Therefore, the control would have lost their power over the flow of information. Next to the deliberate obstruction of the flow of the incident information, the unintentional disruption of the process is provoked by the carelessness of the employees. The few formal procedures that dictate the obligations of control employees towards the PO are not always applied. Under these circumstances, communication becomes personalized. In order to accomplish their tasks**,** PO personnel contact specific control employees, with whom they affiliate and who they trust. This long-lived practice reveals that the informal interactions overpower the formal relationships developed amongst HFC employees.

[63] http://ec.europa.eu/environment/civil/forestfires_el_2007.htm, accessed: 03/12/2007.

4.1.2. Liaising HFC with other responder-organizations

First-responder organizations do not engage in frequent communicative interactions during non-crisis situations and, therefore, during emergencies, they fail to identify the other organizations' obligations, routines and procedures. Lack of awareness on an operational level reflects lack of strategic decision-making on an administrative level. Whereas meetings do take place between the HFC and other emergency co-responders, these meetings are routine encounters of organizations, rather than substantial accounts of their procedures, their capabilities, such as availability of resources and degree of emergency preparedness. Fire, rescue, ambulance services and the police are the predominant first-responder organizations. Depending on the type of the emergency encountered, local authorities' services, electric and gas companies, military units and other organizations such as environmental agencies may also be involved in emergency responses. The missing link between the co-responder organizations is the *liaison* [officer], who should serve as the primary contact for supporting agencies assisting in an incident (Argenti 2003).

a. Cooperation with the police: "Colleagues" and "comrades" on a need-to-assist basis

Communicative interactions between the HFC and the police occur on a *need-to-assist* basis and, generally, after the senior fire-officer in charge on-site requests police assistance. According to a set of informal procedures titled *Memorandums of Action* (MoA)[64], the CCC dispatchers may notify the police during fire incidents in "basements, industrial facilities and refineries" in order to intercept or divert traffic. MoA provide consultative guidelines to communicative interactions undertaken by control dispatchers, rather than taking the place of SOP. Hence, it is in the CCC dispatchers' discretion to follow the steps recommended. However, MoA fail to prioritize the calls according to the minimum number of dispatchers or operators employed in the CCC: i.e. 1st call to mobilizing the appropriate type and number of appliances; 2nd notifying and/ or instigating the mobilization of the ambulance service or the police and so on. Even as the MoA are

[64] The MoA document is not an official service order but written guidelines used by the control personnel. A copy of this document is included in my fieldnotes (May 2006).

drafted, notifying the police is the lowest of the dispatchers' priorities, with the role of the police considered as auxiliary. So, the HFC is neither constant nor consistent in its communicative interactions with the police. HFC employees do not even inform the police about an emerging incident they attend. This however may result in the police being unable to provide immediate assistance when requested by the HFC (episodes C, D). The former may need some time to re-direct police patrols to the incident-grounds and the volume of traffic may not allow their immediate access to the incident-grounds.

Lack of coordination was also manifested in episode D. The fire-engine was left on the demonstrations-front while police headquarters removed the patrol units away from the raging demonstrators without informing the HFC control about their decision. When one control-officer contacted the police headquarters to ask about their operational tactics, the police officer who answered the phone (D, 79) diverted the call to a higher-ranking officer while commenting: "A fire person with the rank of lieutenant colonel needs to speak to you because he wants to make a decision." The indifference towards the caller is expressed with the phrase "a fire person", although the control-officer had identified himself and stated his request. While diverting the call, the police officer did not put forward the request made by the HFC employee but his rank. The use of "need" indicated that the HFC actions depended on the police decisions.

The actual independent decision-making of the responder-organizations on the demonstrations-grounds indicated that there was minimal cooperation between the two organizations on a formal level. When the control-officer initiated the conversation with the senior police officer, the former addressed the latter as "colleague". Lack of predetermined procedures sustain the development of informal relationships and empower the role of its organization-members, off-and on-site (Selznick 1952; Hofstede 2005; Schneider and Barsoux 2003). As a result, responders affiliate by inclusion: the police are the HFC "comrades" or "colleagues", as often addressed in the recorded conversations, due to the fact that they are employed by the same Ministry.

The police are quite often the source of incident information. They contact the HFC control in order to forward information received by civilians with regard to emergencies the HFC attends to. However, police rarely provide the name or number of the caller so as to

facilitate the HFC control personnel to verify the information or to request additional information in order to plan and instigate the mobilization. Occasionally, they may not be a valid source of information. According to SGCP officials, not only were the police unaware of the plane crashing in Grammatiko, but they informed the SGCP that the plane was in the process of landing (E, 81).

During episode C, one of the control dispatchers contacted the police in order to verify the information one of the police operators had forwarded to the HFC control. The police officer who answered the call was unaware of the information. So, he commented: "wait just a moment so I can ask the one who recorded it […] he is a bit dumb […] [meaning the police operator who logged in the information]?!" and called him by his name while he was on the phone with the CCC dispatcher, thus revealing his identity to a third person. This phrase encapsulated a cultural and a technical issue. On a technical level, the information in the CCC of the police was not accessible via a software system; it was the operator of the system who had to access it in order to retrieve the information requested. On an organizational level, a voluntary breaching of the organization's consistency took place. A criticism was passed on one of the organization-members and communicated to another organization.

b. The ambulance service: A problematic co-actor

In the cases examined here, the relationship between the HFC and the ambulance service personnel was even less collegial than the relationship between HFC and police employees. During the fire that erupted in the "Square Tower" (episode B) the medical doctor of the ambulance service who was on-duty that evening contacted the control to complain with regard to why the HFC dispatchers had requested an ambulance unit to proceed to the firegrounds: "doesn't the HFC have its own ambulance?" The HFC provides an ambulance and a team of doctors and paramedics to care for the HFC employees off- and on-site.[65] If necessary, until ambulances reach the incident-grounds, this team may also provide first-aid to civilians during emergency responses. Nonetheless, the ambulance service is obliged to provide assistance when requested. Yet, the medical doctor negotiated the ambulance service's assistance on the firegrounds. In the midst of an emergency

[65] Presidential Decree 210/1992, article 113, paragraph 14; P.D. 122/1990, article 2; P.D. 426/1991, article 47, paragraphs 4,5,6.

response, the existent standard operating procedures failed to define the limits of inter-agency cooperation.

Failure to identify the role of the responder-organizations on the incident-grounds is also depicted in episode E. The rescue and recovery operations that followed the plane crash required a well orchestrated set of actions on-scene by the responder-organizations. Yet, many of the conversations conducted between dispatchers and officers, and between control personnel and fire-station operators, concerned the accumulation of bodybags. HFC personnel were engaged in retrieving bodybags from the fire-stations and sending them on-site; a task officially performed by the ambulance service. The first twenty-four hours of the response portrayed the conduct between the control and the ambulance service.

What in the beginning appeared as a displaced preoccupation with bodybags soon became an obsession. Following an initial conversation with the vice-president of the ambulance service, a series of communication conduct between the CCC dispatchers and officers, and the fire-station watch officers and operators, was realized to accumulate as many bodybags as possible, despite the reassurances of the ambulance service with regard to attending to the matter. Introductions between the CCC and the fire-station personnel involved in the bodybags accumulation process soon became redundant as they instantly recognized each other's voices over the phone. The personnel's insistence with locating the bodybags revealed mistrust between co-participants in the emergency response organizations. The ambulance untimely responses had created a precedent that cultivated a climate of doubt and suspicion. Additionally, the expectation of both the media and the public was that the fire service would be able to cope effectively with the disaster. These expectations were explicitly emphasized as rescue and recovery operations after the plane crash were compared to the rescue operations launched after the earthquake, in Athens, in September 1999, when the prestige of the HFC as an effective emergency responder acquired a *heroic* profile (Chlimintza 2002), thus enhancing the HFC status among other responder-organizations. Therefore, the HFC personnel felt they had to cover all aspects of the emergency response in a solo performance. That is one of the principal reasons for assuming the role of the SGCP.

During the conversations between the HFC control and the ambulance service power related issues became apparent. Organizational resources appear to belong to the officer or the official in charge of the organization: “I have 30 units on the way […]” (E, 136). Moreover, the process of familiarization was rapid. By the third time one organization was contacting the other, positions held in the command or the managerial structure of the co-responders did not appear to matter to the communicators. They were addressing each other as “friend” or “mate”. This transition from formal – where status was explicitly stated – to informal interactions is a habitual practice in the HFC. Informal interactions allow tolerance with regard to tactical or operational misconduct amongst emergency co-responders. Tolerance is almost always reciprocated: those who were tolerated will tolerate. Yet, these informalities occurred on an interpersonal level. On an organizational level, the mistrust continued until the accumulation of bodybags reached an end. This ending came when the fire-stations ran out of such resources.

c. The undermined SGCP

Seldom is the SGCP contacted on time about issues the organization should attend to (episodes A, D, E). The protagonist role of the HFC on-scene allows very little space for this newly developed organization to assume the role for which the agency was destined. Episode A indicates that the SGCP was not notified about the derailment of the train by the control. The SGCP officer was informed about the incident by the Secretary GCP, who was a very popular former chief fire-officer. It appears irregular for the director of an organization to access incident information before the control room that deals with emergencies. The control administration contacted the director, who in turn notified the SGCP control. The disseminating of information revealed the priorities of the organization-members. Higher-ranking HFC officers chose to inform the director rather than the emergency unit of the organization. The prioritization indicates that next to its practical use the information acquires a symbolic power. When the SGCP personnel got wind of the incident, they placed a call to receive information about the progress of the response. As soon as the SGCP employee received the necessary information, instead of ending the conversation, or reprimanding the control about their negligence or discussing the potential involvement of the SGCP in the response, the SGCP employee asked after a control employee he used to know.

This transgression of formal procedures and the simultaneous effort to informally affiliate with control personnel, once more reveals the extent to which informalities have penetrated the sphere of the formal. Towards the end of episode C, an operation unit on its way to an incident asked the control whether the SGCP was notified. The incident appeared to be insignificant and the control officers had not notified the Secretariat. Nonetheless, the control officer answered the operations' unit that they had notified the SGCP in order to avoid any reaction on part of the crew.

A few minutes after the mobilization began to take place, during the plane-crash event, one of the senior control officers *remembered* (57-59) to contact the SGCP and instructed one of the junior officer to do so. As it would be a simple announcement rather than a meaningful cooperation, for that senior officer this was a secondary task. From the beginning of the conversation and after the initial necessary introductions were made (64-71), it became clear that the HFC and SGCP representatives lacked communication skills and training. It is at this point that one finds it crucial that, through their policy makers, the governments should understand the importance of making an investment to provide necessary training to first responders' organisations in crises situations. The SGCP officer A sounded certain with regard to the events that were taking place (70). He announced the source of his information so as to validate its content. Under those circumstances, the control officer thought it unnecessary to further engage in the conversation as he assumed that the SGCP officer was aware of the events unfolding. Before he hung up the phone, he asked, out of courtesy rather than standard procedures, whether the SGCP required something in particular (71) from the HFC. Luckily, the SGCP officer conveyed the information he had about the incident: the plane was in the process of landing (72). From the following part of the conversation (73-78) it can be deduced that the source of information plays a vital role in the reception of the information. The validity of the information depends on the skills, experience and rank of the person or the organization that delivers it. The information may be regarded as "problematic" when delivered by lower-ranking personnel with little experience and no reputation.

Moreover, in this conversation, more than two minutes are wasted on who is the *keeper* of the correct information rather than on the response, which should have been a priority. Frustration governs the discussion and then another round of conduct with regard to who

received valid information from whom, was initiated (79-81). The communication was once again distorted. The information was mis-communicated either when it was received by the police after contacting the air traffic control tower or during the Secretariat's communication with the police. Either the police made a mistake in transmitting the information or the Secretariat in receiving it. Towards the end of the conversation, and before expressing his frustration (89), the second SGCP officer required the identification of the source of information (85). Repetitions revealed that both communicators were still preoccupied with the news about the crash to the point that they could not plan their next move (90-91).

In the cases examined, communicators rarely pay attention to the content of the information one is conveying to the other. They have formed a certain mental picture about the unfolding events that they maintain throughout their conversations. Evidently, their picture comprises a rather rigid matrix with predetermined structures that the holders are not easily willing to let go while engaging in an information exchange process. As a result, disbelief and mistrust obstructs the process of establishing cooperation in view of an emergency in progress.

d. Occasional emergency responders with an auxiliary role

Cooperation between the HFC and co-responders such as the Electric and the Gas Company or the Hellenic Railways Organization is achieved to different degrees. The HFC regularly cooperates with the Electric Company. The HFC frequently requests the EC to cut off the power in affected buildings on the incident-grounds. The frequency of their interactions led to establishing a direct communication via a reserved telephone line. The use of the reserved telephone line indicates who instigates the communication process. Thus, no introductions are required.

During episode C (106-117), the dispatcher forwarded the necessary information as soon as the EC employee answered the telephone: location and type of incident. The dispatcher neglected to mention the use of the compromised building. The background noise obstructed the dissemination of the information and the dispatcher repeated was requested

to repeat the message verbatim (107-108). Yet he put forward a brief greeting that indicated the urgency of the situation interwoven with the increasing irritation of the dispatcher. The dispatcher did not use the words “pal”, “friend” of “colleague” but a metonym that depersonalized the communication conduct and kept it formal and instrumental: “Hey EC.” In order to hear the message the EC employee shouted at his colleagues to reduce the noise and prompted the dispatcher to repeat his message for the third time. The dispatcher was simultaneously involved in mobilizing the operations’ units and giving different instructions to different responders involved. His being over-involved in the mobilization process made him confuse the information he knew very well. He thought he forgot the number in the address and requested another dispatcher to verify it (110). Following the request of the EC employee who was noting down the address rather slowly the dispatcher announced the incident, repeated the same information another three times (108, 110, 112) and verified the same information another two times (114, 116).

On the incident-grounds getting in touch with the EC emergency team was an ordeal. In the midst of the chaotic environment by numerous fire personnel who were loudly communicating amongst them, the IC was unable to contact the EC unit. The unit also failed to establish contact once on the firegrounds. So the IC was forced to instruct control dispatchers to contact the EC emergency room to instruct their unit on the firegrounds to contact the IC, a task that the unit could have performed once on-scene.

The initial contacting of the Electric Company emergency room was a rather easy task to perform by control dispatchers due to their regular interactions. This, nonetheless, was not the case with the Gas Company or the Hellenic Railways Organization (OSE). The irregular cooperation between the HFC and the Gas Company did not result into establishing direct contact through a reserved telephone line. The use of gas as an alternative source of power did not alert the HFC with regard to establishing similar methods of communicating to the Electric Company (episode B). Eventually, an operator answered the control dispatcher only to inform him that there was no active network in the affected building.

The OSE was a rather difficult organization to access. The control personnel appeared ignorant at to how to establish communication with the OSE. They were unaware of the

organization's structure and, therefore, of who to contact in order to request information with regard to the trains that collided. No provisions were made so as to establishing a direct telephone line with one of the largest public and freight transport organizations in Greece. In order to establish communication with a representative of the organization, the CCC dispatcher, contacted OTE which provided the CCC dispatcher with a 24-hour line open to the public where the CCC personnel could reach an employee of OSE. Communication was not established from this initial effort made by the HFC.

Eventually, the control located one of the representatives of the OSE who went on-scene so as to investigate the causes of the collision. The OSE representative was on-scene before the control personnel located him. Yet, he had not been in contact with the HFC operations' units on-site. When one of the control employees requested the passengers' lists and asked whether the rail-tracks had electricity, the OSE employee abruptly interrupted the conversation commenting that their line of questioning was of no interest to him. Nonetheless, he did answer the question with regard to the tracks but he did not provide the passengers' list. Evidently, OSE failed to establish communication with the rescuers on-scene, and to provide answers to assure their safety and to assist the HFC units to safely remove all passengers from the collision-scene.

e. A brief commentary

As Allan McConnell (2003) maintains "crisis response are rarely neat. Often they are a product of a series of intra- and inter-agency conflicts covering a wide range of governmental and non-governmental bodies." Different degrees of cooperation are achieved between various emergency co-responders. Reserved channels for communicating incident information are not always in place. The incident information is communicated orally and it has to be repeated in order for the recipient of the information to properly register it.

The different *modus operandi* and objectives of the co-participant organizations result in organization-members acting independently on the incident-grounds. Complexity in cooperation increases as organizations' weaknesses and particularities are diffused on the

incident-grounds. However solvable the problems within organizations, when these interact on the incident-grounds they may hamper interoperability. Therefore, it is important to identify organizational culture, potential problematic areas, before drafting or attempting to implement standard operating procedures. Otherwise, an organization's peculiarities will be projected as the other organizations' weaknesses that will produce and reproduce disruption in communication on and off the incident-grounds.

The lack of knowledge, training and trust generated doubt and suspicion among organizations involved in the incidents (Weick 1993). The absence of a risk register resulted in a lack of existing emergency planning, which would allow the introducing and the implementing of standard operating procedures. SOP in turn would clarify the distribution of responsibilities on and off the incident-grounds. Consequently, communication between the organizations involved in the incident was occasionally not established and unified command was not achieved.

4.1.3. Securing personnel on the incident-grounds

The safety officer monitors the conditions of the fire- and rescue-grounds and develops measures for assuring the safety of all responders on-scene. This is an unusual practice for the HFC. During the Helios plane, the IC's instructed operations' units to proceed in the compromised buildings (C, 139-141); they decreased the number of fire-fighters on the incident-grounds based on erroneous assumptions (B); they provided contradicting orders to the operations' units on-site. The units self-dispatched and the officers in charge lost track of the appliances and, thus, track of what the responders were doing on-scene (A, B, C, D, and E). Overall, working conditions were not monitored and the safety of the personnel was not assured on the incident-grounds. There was at least one case of injury reported during episode B. A volunteer fire-fighter approached the incident-grounds with no precautionary measures, such as a breathing apparatus, either because there were no spare apparatuses in the appliance or because he neglected to use such apparatus. He was poisoned by the toxic smoke generated from the fire.[66]

[66] Fieldnotes, April 2006.

4.2. The general staff: The practices of the operations' personnel

As shown from the cases examined, two of the most frequently emerging problematic issues on an operational level are, first, the phenomenon of self-dispatching; second, the fact that operations' personnel, either higher- or lower-ranking employees, are frequently unfamiliar with their area of jurisdiction.

4.2.1. Self-dispatching: Unruliness on the incident-grounds

On the actual operational level self-dispatching, if one uses the American term – or self-deployment and self-involvement, the English versions – reveals an unruly habitual practice. Self-dispatching is usually defined as the decision of operations' units or personnel to proceed on the fire or the rescue-grounds on their own initiative. Two additional aspects to self-dispatching that emerge from the Hellenic episodes examined that have not yet been identified as such are, first, on-duty personnel being deployed on the incident-grounds according to their judgement and regardless of the orders they receive by the operations' officers and, second, withdrawing or intending to withdraw from incident-grounds without permission (C, 105). In both these cases, self-dispatching equals insubordination and breaches the safety of the personnel working on the incident-grounds. Self-dispatching can be a significant obstacle in managing emergencies. A British senior fire-officer eloquently described self-dispatching during one recent major disaster:

> We had to restrain people from self-deployment […] their [on-duty] colleagues were phoning them on mobile phones: 'oh, here is great come and join us […]'. The mobile phone was almost the biggest enemy at the incident because they were phoning each other back and forth were taking pictures of people trapped that was shocking […] they should be kept somewhere in the room.[67]

However, in the Hellenic episodes examined, such phenomena did not emerge. Self-dispatching is the result of mismanagement on the fire- or rescue-grounds: the unclear command structure, the inability of the IC's to manage the resources, the population of the

[67] Senior fire-officer, pers. comm., 15 March 2007.

emergency co-responders and the chaotic circumstances of the emergency. Thus, in the course of the emergency response, the operational role of the crews and their appliances remains unmapped and their status uncertain.

Often, control employees realize that dispatched resources have gone missing. These five episodes alone indicate that this is not a coincidental consequence resulting from occasionally mismanaging emergency responses. This phenomenon stems from how the organizational resources are categorized, ordered, dispatched, and, eventually tracked and recovered. Resources are defined as operations' units (personnel, appliances and equipment), supplies and facilities, potentially available to support emergency responses. All the episodes examined indicate that, as soon as control dispatchers get hold of information with regard to an emerging incident, they start contacting the station operators in order to dispatch the necessary number and type of appliances to the incident-scene.

Categorization of resources should occur prior to emergency responses, when planning for these events. The decisions for distributing organizational resources on the various fire-stations are made based on the risks entailed in the area of the fire-stations' jurisdiction. The higher the potential risk presented in an area, the closer the appropriate resources to mitigate an emergency are located. Different appliances may carry different equipment designed for specific fire-fighting or rescue purposes. Therefore, as soon as they become part of the stations' resources, they are given a plate number and a number that indicates the role the appliances assume when they become part of operations' units. For example, the first-response unit is comprised of two appliances. When dispatchers mobilize the "first unit" of a fire-station they refer to two appliances - the "first [appliance] of the first [unit]" or "1.1" and the "second of the 1.1". The commanding officer mounts the first appliance that leads the response. Both the first and the second appliances are usually dispatched simultaneously but they can be mobilized separately, depending on the type and the extent of the emergency. Classifying the appliances according to their type and role in emergency responses is a significant part of the mobilization process.

Confusion during emergency management emerges when dispatchers track the appliances not based on the plate number which is unique for each appliance, but based on how they are classified (episodes C, D, E). For example, the first response unit from the first

Athenian station is named 1.1. So is the response unit from Piraeus. When contacting the CCC, the crew should state whether it is the Athenian or the Piraeus pump. During training courses, it is explained to fire-fighters that, in their conduct with the CCC, they should state the area in which their station is based. This is not always done. The reasons for this omission may be attributed to the inexperience of the fire-fighting crew or the stressful state under which a crew is operating when responding to emergencies. Such misconduct is considered minor by organization-members and it is, therefore, rarely reprimanded. Minor, as opposed to major misconduct, bear little significance for the mobilization process, as communicators' experience and actions help to overcome any misapprehension in the content of the information exchanged. For example, the dispatchers are aware which appliance they mobilized and, therefore, they assume that the operations crew contacting them is from the engine they have dispatched on-site. The problem, however, can be detected during a response in which both appliances are used. In such case, due to an extensive workload, the dispatcher may have in mind which appliance should be re-dispatched to its station. However, if the crew provides incomplete identification, he/she may re-dispatch the incorrect one.

The ordering of the appliances begins when control dispatchers are informed about an emerging incident. The number and type of appliances mobilized depends on the existent emergency plans or the dispatchers' experience, in case there are no plans available. The ordering continues according to the needs of the operations' units. Following the initial ordering of the resources, the dispatchers place a call either to the station operators or to the operations' units so as to verify whether certain equipment necessary on the incident-grounds is functional and on board the appliance and (episodes A, B, C, E).

The fire-station operators are commissioned to register the activity of the fire-stations' resources. In emergency responses, changes in the distribution of crew and appliances are bound to happen due to the type and intensity of the emergency. Operators frequently fail to update their inventory concerning changes in the schedule, and to familiarize themselves with the code names of the appliances as well as their plate numbers. The operators' inability to immediately report the vehicle's number reveals the level of organizational preparedness to regroup its resources during an emergency response or reorganize in view of simultaneously emerging incidents.

Tracking and recovering fire and rescue resources begins as soon as operations' units are directed to proceed on the incident-grounds and continues until they return to the fire-stations. Tracking and recovering resources results in accounting for losses and regrouping capability. In all cases, the larger the mobilization and the larger the size of the FRS, the harder it is to monitor fire and rescue operations' units on the incident-grounds, and in the CCC. The objectives of the FRS are to promptly deploy their resources, and account for them at any given time during the operations, so as to be able to redeploy them instantly. However, these objectives are often not met by organization-members either on-site or in the CCC.

HFC real-time communication indicates that tracking and recovering resources on and from incident-grounds depends on a set of verbal communicative interactions amongst participants in the emergency, both on the fire or rescue site and in the CCC. "We've lost the ball", a metaphor that can be interpreted as "things have completely fallen apart", is the phrase that often emerges from the communication conduct of fire-fighters on the incident-grounds and in the CCC. The usual practice to avoid "loosing the ball" is for all actors involved to fulfil the tasks prescribed by the role. For example, as soon as the operations' units are mobilized, the senior crew member of each appliance is responsible for contacting the CCC in order to log in any change in the status of the dispatched unit. Control dispatchers should be notified: first, when the unit is leaving the fire-station to proceed to the incident-grounds; second, the moment it reaches the incident-grounds; third, when it proceeds for replenishment; fourth, when it assumes operational status after the replenishment; and, finally, in any other case when the status of the unit, as previously declared to the CCC, changes.

In a similar way, the station operators are obliged to register any changes in re-assigning personnel from one appliance to another or to make a note of which appliances are leaving the station, where they are deployed and at what time (e.g. A, 107-115). The control dispatchers keep records of which appliances they mobilize, where they are dispatched and at what time. Nonetheless, either by ignorance or negligence, crew members do not always engage in these regulated communicative interactions. They are not adequately trained nor are they disciplined when they fail to comply. Their actions are subject to little evaluation or supervision, and so neither ignorance nor negligence is rectified. What HFC employees fail to realize, due to this gap in supervision, is that an omission on their part when they

engage in an emergency response creates an *anomaly* (Manning 1992; Perrow 1999) that not only affects them but the entire network of actors participating in the emergency response, both those on the incident-grounds and those in the CCC.

Tracking the resources becomes more complicated when the multiple actors involved in the process engage in power-games. During the rescue operations launched on the collision-scene, control personnel made an effort to account for the appliances on-site (A, 116-123). Officers and dispatchers labour independently so as to accumulate the same information. This absence of coordination continues as officers choose to engage in superfluous and time-consuming communication conduct with the dispatchers, to verify the information they have gathered, instead of requesting, for example, a copy of the dispatchers' records. During the aforementioned conversation, the officer made use of his status to impose his mental picture of the mobilization on the dispatcher, by requesting the information he needed in the sequence that he chose, disregarding the dispatcher's sequence of conveying the information requested.

4.2.2. Seeking directions: Unfamiliarity and embarrassment

Throughout the episodes examined, operations' units and higher-ranking officers were heard asking for directions on how to proceed to the incident-scene. They sometimes contacted control personnel via telephone so as to ask for directions; they sometimes requested directions via radio. Usually, they understood and followed the directions the control dispatchers and officers provided them (B, 88-98); occasionally, they did not (A, 1-9).

The operations' personnel ask for directions when they are dispatched away from their area of jurisdiction, providing assistance to a neighbouring fire-station. In this case, they require assistance to reach the incident-scene promptly (A, 1-8). Each engine is equipped with a map of the city. Operations' units also ask for directions when this map is old, poorly preserved, has missing pages or missing altogether from the appliance. The third case the operations' units ask for directions is when they are unaware of their area of jurisdiction (B, 54). Such unfamiliarity with the area of jurisdiction also reveals that

personnel are ignorant with regard to the risks involved in the same area, such as the location of factories or industrial facilities. A routine event (E, 157-166) revealed that the operations' units were unaware of both their area of jurisdiction and their practices.

In the majority of the cases studied, operations' personnel request directions via telephone. According to procedures,[68] dispatchers are obliged to communicate messages via radio. Yet the procedures are rather vague as to the content of the messages exchanged. So dispatchers may provide directions via both channels. After the freight and commuter trains collided in 2006, at least four appliances and three high-ranking operations' officers requested directions via telephone, in order to proceed on the site where the collision took place. The already scarce control personnel dealt with responding to every one of the calls made so as to facilitate the appliances to reach the scene promptly. However, when dispatchers provide directions via radio, all the operations' units mobilized may access the same essential information.

Nonetheless, the main reason why operations' personnel (A, 1-9; C, 147-154), and especially high-ranking officers (A, 30-43; B, 54; E, in at least five cases), seek directions via telephone is to avoid embarrassment. After the freight and commuter trains collided in 2006, the operations' units dispatched on the rescue-scene asked the control employees for directions on how to proceed on-site. A dispatcher briefly explained the route they were to follow. The crews acknowledged the dispatcher's transmission and replied that they were on their way. However, before they hung up, one of them was heard saying to another: "do we know how to get there?" First, they should have asked the dispatchers to provide them with page number of the map, and, second, they should have acknowledged that they did not understand the directions. However, asking for directions repeatedly has generated conflicts between the operations' units and the control employees, on the grounds that crews should know their area and should, therefore, be able to immediately comprehend the information. In cases where appliances are mobilized outside their area of jurisdiction, they should at least be able to read maps and follow the instructions provided by the control. The recordings have indicated that writing down the directions, when transmitted by the control, takes the crew a lot of time and is still not enough because transmitted at dictation speed. Senior officers appear to have problems reading maps when proceeding to

[68] Government Gazette B' 37/1996, no 34542, Φ.109.1.

incident-grounds. This recurring phenomenon underlines the necessity of more appropriate training. In the Hellenic Fire Academy, trainees are not taught how to read a map. Despite the evidence provided to the contrary, reading a map is still considered self-evident. Senior CCC dispatchers argued that a significant number of fire-fighters either do not know how to "read a map" or "get bored" and avoid searching for directions on the map.

Instead of using the radio to interact with CCC dispatchers, high-ranking officers generally use their mobiles to contact CCC officers. These officers labour under the misapprehension that engaging on a one-to-one communicative interaction spares them the embarrassment of formally admitting their ignorance to lower-ranking personnel. Therefore, they occasionally contact not the control dispatchers but the control officers (B, 52). However, it is not the task of CCC officers to provide directions. This task is reserved for CCC dispatchers, who have both the experience and the software to correctly direct operations' personnel to the site. When CCC officers are contacted, they assume the role of the mediator between the operations' officers and the dispatcher, as indicated by the above communicative interaction. Hence, what appears as a simple transaction becomes a time-consuming requesting and receiving process, which may affect the context of the information exchanged. Inaccuracy may be the result of the information reaching its destination through long and indirect channels. During the "Square Tower" fire, the IC contacted the CCC dispatchers requesting directions as to how to reach the site. Generally, the IC's vehicle is equipped with a map. A fire-fighter, who should be familiar with the area of the station's jurisdiction, is appointed to drive the IC's vehicle. The IC should also be familiar with the station's jurisdiction. As is frequently the case in the HFC, and specifically in this case, none of the above conditions were met. During episode A, on his way to the incident, the chief fire-officer contacted the CCC on the radio to ask for directions as to how to reach the incident-grounds. According to procedures, he stated his code name and asked for directions. Befuddled by such unusual practice, the dispatcher sought advice from the control officer as to how to reply to the CFO's request. The officer's instructions indicated how power is sustained by the communicative interactions between lower- and higher-ranking personnel.

Despite the fact that senior officers should be familiar with the area of their jurisdiction, when this knowledge is limited and they need to contact the CCC for information, they resort to a mode that minimizes their embarrassment: humour. In one of the emergency

launches in 2006, the commander of the station that had jurisdiction over the area placed a call to the CCC to ask how to proceed to the fire grounds. After receiving the necessary directions he commented to the CCC dispatcher: “It is a critical situation”, referring not to the actual crisis but to the selection process for the new leadership in the HFC, the Hellenic Police, the Coastguard and the Military. Wordplays or questions concerning the personal life of the communicator on the other end of the telephone line occur frequently. They are used, first, to conceal deficiencies and, second, to cultivate a climate of familiarity. Familiarity is achieved when humour and teasing counterbalance an emotionally charged situation.

4.2.3. Radios and mobile telephony

In the Hellenic cases examined, misconduct of radio communications due to human error is a significant issue. Operations’ personnel use certain frequencies though having been instructed to use different frequencies. Interferences in each other’s frequencies lead to communication mismanagement and superfluity in communication conduct.

Mobile telephones have by and large replaced the radio network. One the one hand, the means justify the ends. Radio devices are not installed in all HFC transport vehicles belonging to the HFC (episode E). Therefore, in at least two of the major incidents examined, the mini-buses carrying fire-fighting personnel on- the firegrounds did not have radio transmitters installed. Moreover, portable radios are reserved for the ICs. There is no interconnection between operations’ officers and operations’ units. In cases where fire-fighters enter a compromised building without their fire-officer, the latter, may not be able to track their whereabouts. In both cases, the rest of the personnel rely on their personal mobile phones. On the other hand, it gradually becomes a habitual practice. In the HFC, the unofficial extended use of personal mobile phones during emergency responses deprives the fire service of its formal character and its official objectives. This unofficial way of conducting emergency communication in an official context affects two substantial principles in the operation of organizations: responsibility and accountability. Responsibility and accountability can be denied on the basis of performing outside the legal boundaries of the organization and hinders organisation members’ performance.

Telecommunication coverage presents an additional obstacle in emergency communications. In certain spaces mostly in urban areas, such as basements and high-rise buildings, and remote rural or mountainous areas, telecommunications are either frequently disrupted or unattainable. In the cases examined, fire and rescue operations in basements present a high risk due to disruption in communications. Although this is identified as a problematic area, operations' personnel generally enter the reception-free zone without establishing contingency communication plans. Occasionally, a few officers contact control personnel to inform them about their actions (B 56). Even mobiles may have problematic connectivity in the basements. When organization-members intentionally ignore the weaknesses in the technical infrastructure and act without introducing alternative routes of action, such technical issues become to organizational ones.

4.3. Conclusion

What I realized while trying to coherently classify and analyse the data according to the ICS-matrix was that such a system is incompatible with the Hellenic experience. Whereas the ICS provides a list of actors involved in emergency responses and divides the tasks on and off the incident-grounds, the Hellenic scene allows its actors to undertake numerous roles simultaneously and interfere with each others tasks.

Common patterns emerge from both major and minor emergency responses. Routine conduct reinforces the findings from the analysis of the organization-members' interactions during emergency responses. For example, processing documentation is one of the most common practices of organizations. In the HFC Service Orders, debriefing operations' personnel, filling in and filing reports are usual tasks performed during, after and in between emergency responses. Debriefing is a process that rarely takes place. Apart from the *reflection* – or in other words, "confession" – tactics that some of the organization-members have developed, higher- or lower-ranking personnel are usually informally reprimanded with regard to misconduct but debriefings as to the reasons that led to the misconduct are not held. Thus, the organization fails to effectively identify the organizational weaknesses and to consequently seek solutions. Furthermore, filling in and filing reports is a rather problematic process. Occasionally, reports are inadequately filled

in (i.e. episode A) and the HFC personnel responsible for completing them do not comply with the requirements of the task.

Another case indicated that conflict is unavoidable when roles are transcended. Control personnel works on a 24hour shift patterns and has, therefore, been assigned to distribute the Service Orders that the secretariat of the HFC, with an 8hour shift pattern, issues. So, control personnel feel that in addition to their workload, they process the tasks that other departments of the organization should have undertaken. The conversation between the control commander and lieutenant commander (C, 169-170) reveals something more than the strong feelings against the superintendent of the HFC secretariat. When the system fails, it is not the system that the employees usually blame. Blame cannot be assigned to an impersonal structure and is, thus, personified. The blame then is attributed to those individuals who are identified with certain functions of the organization, especially when they remain in the same post for a long period of time.

CHAPTER 5

THE ROLLERCOSTER OF THE INFORMATION DISSEMINATION PROCESS: CONCLUSION TO THE HELLENIC CASE

The most significant contribution of the control personnel is that they dispatch appliances to the incident-grounds directly after they receive information about an emerging incident and they mediate the communication of the incident information amongst responders on- and off-scene (figure 1).

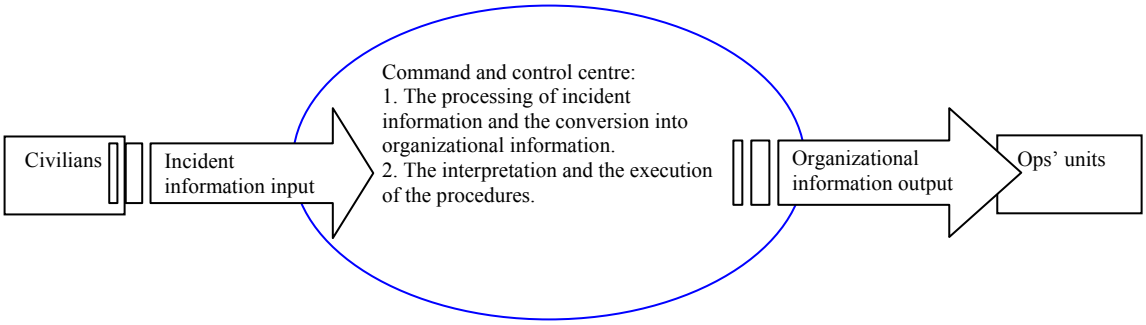


Figure 1: The role of the command and control centre

In this chapter I focus on how control operators receive the incident information and how information is communicated, first, to the control dispatchers, second, to the station operators so as to dispatch the organizational resources, and, finally, to the command structure of the HFC. The majority of these communicative interactions indicate the practices of the organization-members during emergency responses.

Dialogues from case studies were selected and transcribed, so as to present the information exchange process through the communicative interactions of organization-members during this initial stage of the mobilization phase. The selection of these dialogues was based on the variety of the type of incidents; the risks entailed, e.g. health risks from the smoke generated by fires or an explosion of flammable materials that had not been previously identified and could potentially endanger the lives of first responders; the range of the

interacting organization-members, i.e. senior and junior, male and female employees in the CCC or on the incident-grounds, communicating so as to coordinate the mobilization process. Therefore, a variety of incidents, combined with a diversity of communicators, provide the opportunity for sociolinguistic comparisons from which to establish similarities and differences in the communicative interactions.

The HFC control room is compartmentalized (figure 2). The operators are virtually isolated from the officers' and the dispatchers' partition. Their isolation coincides with their role in the information exchange process. Operators are merely assigned to extract the information necessary to instigate the mobilization process. The control officers have the operators' room in vision but they directly oversee the dispatchers' cubicles and the EM. The officers' interest lies not in the initial incident information but in the assessment and the conversion of incident to organizational information.

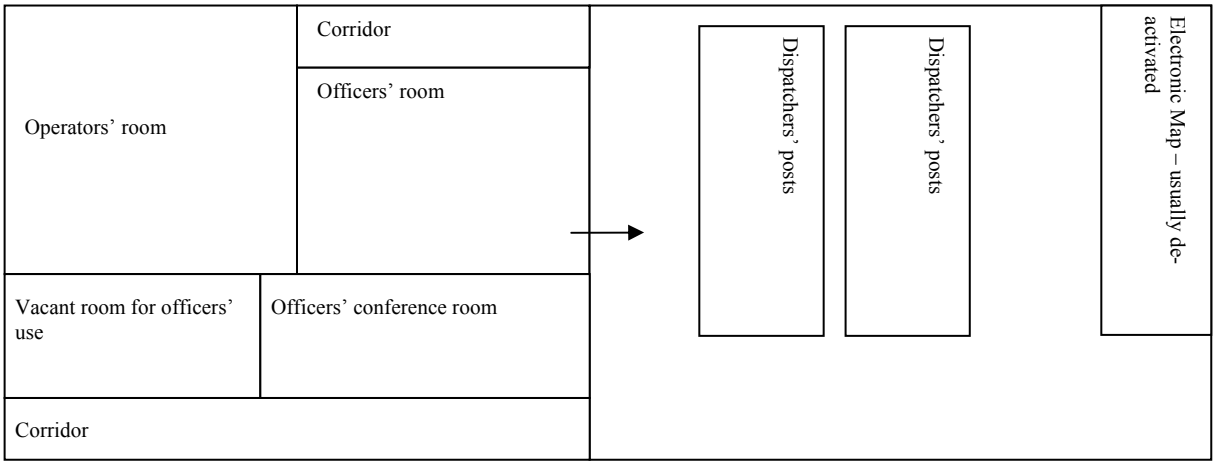


Figure 2: Positions and settings in the HFC control room

Analysis of the communicative interactions during the initial phase of mobilization reveals a number of problematic issues. These issues indicate that intra-organizational crises arise as the organization strives to manage extra-organizational crises. Power related issues distort the information dissemination process and the management of the organization's resources. The lack of standard operating procedures (SOP) leads to a pre-crisis mismanagement of the information disseminated during the communicative interactions of organization-members. During the negotiation processes and centralization of the decision-making processes this lack results in conflict.

5.1. The initial incoming incident information: How control operators engage in essential and trivial conduct with civilians

The management of the incident information at an early stage of the emergency response reveals the organization's intention to engage in the response process, the protocols of engagement and the actual engagement that depends on the individuals who undertake the role of the control operators. Operators are those organization-members who receive, assess and communicate the initial incoming information either to control dispatchers or to control officers or both. Operators engage in eliciting as much information as possible, such as what has been witnessed, where, when, and who is involved. This practice is conditioned by a set of standard operating procedures, and the operators' on-the-job training and experience.

The first step in emergency communication is to communicate the emergency. To report an emergency, civilians dial three distinct emergency numbers: 1-0-0 for the police, 1-9-9 for the fire and rescue service and 1-6-6 for the ambulance service. The 1-1-2 number is also used European-wide to report emergencies from either a fixed or a mobile line. Some countries use it as their primary emergency number, whereas others direct the 1-1-2 calls to the local emergency numbers. In the HFC control room, when all the available telephone lines are occupied, civilians are either put on hold or asked to re-dial or contact the CCC of the police, in which case, the police contacts the HFC control and forwards the incoming incident information.

According to procedures, control operators are instructed to request essential information such as the type (i.e. fire in an apartment or road traffic collision) and the address or the approximate location of the incident. When more than one call is placed to the control with regard to the same incident, operators are instructed to register those calls and inform the callers that the HFC has received the information and is attending to the incident. SOP fail to indicate whether operators should or should not engage in eliciting possible additional information with regard to the reported emergency from the calls that follow the initial announcement. A usual conversation between control operators and civilians is conducted as follows (episode C):

COP	***Fire service.***
Civilian	***Yes, there is a fire at Lambraki Street, a factory.***
COP	***Yes we are informed, madam. We are on our way.***
Civilian	***Thank you.***
COP	***You're welcome.***

The control operator, who answered the telephone call, did not request any additional information with regard to the incident that had already been reported to the control. Nonetheless, recorded conversations indicated that the initial incident information was incomplete (C, 7; 9). The control operator who received the initial information with regard to the fire erupting in the factory was certain only about the location of the incident. So, requesting additional information may have provided a more detailed image of the incident. Yet, another call was placed by the police:

Police	***Hi we are calling from the police centre. We have a fire at...***
COP	***We have been informed. We are on our way…***
Police	***Oh good. Bye.***

The control operator assumed that the police were about to announce the same fire civilians had communicated to the control. The control operator abruptly ended the conversation, against procedures. According to Service Orders, he was obliged to request the name and number of the person who contacted the CCC of the police control with regard to the incident. However, not only did the HFC operator failed to request the type of information indicated by the SOP but also he appeared uninterested in the type of information the police may have been in position to provide. Since the emergency was out of their jurisdiction, the police complied.

Verifying or seeking additional information is an essential time-saving process. Civilians who contact the control room about an incident may have perceived the emergency in different ways. "Risk perception is not an objective judgment of dangers […] [it] does not have the same affect on – and it is not perceived in the same way by – all people" (Vazquez and Marvan, 2003: 62). Episodes B and D indicate that at least four civilians provided contradictory incident information. The callers appeared certain that the information they provided was accurate.

Furthermore, civilians are not always calm when they contact the HFC control and, thus, they are unable to provide precise information. Despite the fact that it turned out to be a minor incident, the smoke generated from a fire that erupted in a public building alerted the employees, clients and bystanders (D, 76-78). The civilian's impatience was caused by the witnessing of the imminent danger. Civilians' perceptions rise even when low-probability risk is concerned (Weick 1988) or if the discussion between them and the control personnel consists of re-assurances about the likelihood of harm (Alkahami and Slovic 1994; Sunstein 2007). So, experiencing an emergency is likely to increase irritation that may obstruct the communication between civilians and the HFC personnel (episode D).

Occasionally, civilians contact the control not to provide incident information but to request information about an emergency usually when the emergency is intense. Paraphrasing Le Breton (1995) and Slovic (1999), the perception of risk entailed in an emergency is an amalgam of the value the parties in the emergency attribute to the symbolic or practical affects as well as the potential consequences of the incident to their routines (Alston 2003). Drawing upon differentiation in perceptions, interactionist theorists such as Lazarus and Launier (1985) have introduced the concept of *coping strategies:* when civilians are in immediate danger, they either seek assistance, support, information from experts, which is considered as an active coping mechanism, or freeze, cry, make jokes, downplay the importance of the situation, try to evade the emergency themselves, which is characterized as a passive coping mechanism (Pearlin and Schooler 1978; Davou 2000). In all episodes examined, civilians contacted the HFC so as to make enquiries with regard to their exposure to the dangers of inhaling smoke and actions they should be taking in order to minimize the risks of exposure to the smoke. The following conversation took place between a control officer and a civilian who lived in an apartment building where a supermarket was operating on the ground floor. The civilian was worried about what would happen if the supermarket was on fire.

FO	***CCC, speaking***
Civilian	***Good morning***
FO	***Good morning***
Civilian	***With regard to the incident, fires etc, etc; oh! I didn't wish you merry Christmas! I am sorry, and have a quiet shift; I am living in the ground floor of an apartment building […]. There were some violations with the urban-planning, but let's leave this out for the time being. That means that if something happens, we will explode with all the quantity of petroleum we keep***

	downstairs. You understand my anxiety.
FO	***Look, you can reach the number so you can ask for the fire safety department and they can let you know what you can legally do about it.***
Civilian	***We fought for that a lot, madam, because there are lots of interests lying there [goes on, more info about embezzled funds and construction fallacies]***
FO	**[The CCC officer repeats her previous reply]**

As an introductory part of a conversation greetings are employed to cultivate a climate of familiarity and lessen the impact of the disruption the communication conduct between a civilian and a control employee has on the routines of the organization. If the impact is lessened it is believed that the CCC personnel will empathise with the civilians' concerns and therefore the information provided to the latter by the former will be more accurate.

After having bridged the *disruption* and the *routine*, civilians introduce their concern. They provide as many details as possible, however trivial they may appear to the CCC personnel, so as to establish a shared value, inclusive of the objectives of both the organization and themselves. Yet what civilians generally overlook in their effort to establish their concern so as to make it worth addressing by control personnel is the workload of the CCC of the HFC. The communicative encounter with the CCC personnel instigated by civilians is triggered by an external emergency. However, the CCC employees are usually preoccupied with managing the emergency response and, therefore, civilians' enquiries overlap with what could be a stressful period for control personnel. As a consequence, control employees will address these *disruptions* hastily. Their hasty response may in turn stir further elaboration by providing background details unrelated to the organization's objectives.

It appears that the personal involvement of civilians affects their perception of the crisis that in turn aggravates the circumstances under which control operators try to elicit the necessary information in order to instigate the mobilization process. Especially when they are involved in continuously answering phone calls during emergencies control operators occasionally neglect to ascertain via the subsequent callers the information they have elicited from the initial source. Moreover, civilians cannot be held responsible for the content of the information they provide to the control operators as they are not expected to

know the type of information control personnel seek. Control operators are responsible for eliciting such information so as to initiate the HFC response.

5.2. How the information is communicated to the control dispatchers by the control operators

This communication conduct emphasizes the standard practices of communicating information in order to launch the response. These practices indicate the role-playing amongst the control actors, the expectations they have of one another, and how the information is evaluated, registered and acted upon.

The information is communicated either shouting or via telephone, as it is usually the case in the newly constructed control centre of the HFC and, more rarely, via a recently introduced software system. Shouting the content of the incoming information to the control dispatchers was a common practice before 2004, when the control room was a large hall shared by control operators, dispatchers and officers. Just before the 2004 Olympic Games in Athens, the CCC was renovated. The room was redesigned to meet the needs of the new technical equipment and to accommodate a plethora of employees. The newly constructed command and control centre, is a large room, divided into five partitions. Three partitions are reserved for the control fire-officers, with one each for the dispatchers and the operators. Direct visual and audio contact through the operators', dispatchers', and the commonly used officers' partition, is almost uninhibited. However, between the operators' and the dispatchers' partition stands the officers' chambers. So, when the operators need to contact the dispatchers they either stand in their doorway and shout the information to the dispatchers or they telephone them (figure 2).

Via the mobilization software the information becomes accessible by the bulk of the control employees involved in emergency responses. Just before the 2004 Olympics, a new telecommunications and software system was introduced in the CCC. The software system allowed control personnel to register incident information they received from civilians, co-responder organizations, HFC responders and organizational information: how many and what type of appliances they mobilize, when and where they mobilize them, the time they

leave their stations, the time they return. Nonetheless, the habitual practices of the past caught up with the newly introduced strategies of the present and so control employees were not consistent in logging in any incoming or outgoing information. A few of the operators still write the information on a piece of paper before they register it electronically and the dispatchers still keep an inventory where they note the resources mobilized for an incident before they log it in the system. Nonetheless, whereas the computer software system offers a formal and a neutral avenue for disseminating incident information, verbal exchange invites interpretations from all communicators involved in the information exchange process, produces constant repetition though successive requests and replies, and, thus, creates actual noise.

After having communicated the initial information orally, the operators generally log it in the system. Somewhere between shouting it (point A) and logging it in (point B), the mobilization of the appliances begins. In between points A and B, the dispatchers have no "physical contact" with the information: they cannot see it on their monitors, hence they usually start asking each other about bits and pieces of the information to refresh their memory. The time period between A and B varies. If the CCC is congested with incoming calls concerning the emerging incident, operators may not be able to log-in or update the information. They find it easier to write the incoming information on a piece of paper rather than type it in the computer software.

The non-automatic interference of the human factor – that is the "shouting" control operator – between the incoming information and the initiation of the mobilization usually obstructs the information dissemination process. In at least one emergency examined, the incident was reported as "over" by a civilian after the mobilization of the appliances and before they reached the grounds. However, the control operator – for unclear reasons – failed to inform the dispatcher promptly. As a result, the appliances reached the site and only when the crews contacted the CCC to request further information about the incident, did the dispatchers forward the information concerning the cancellation of the HFC assistance and re-dispatched the vehicles back to their stations (episode A).

The information reported to the control centre may be an emergency (B, 1-5), an alleged emergency (C, 1-12) or a potential emergency (E, 1-33). Operators should report any

information to the dispatchers. Operators play the role of the intermediary between the incoming information and the organization's response to that information. It is clearly defined by the rules of the control room that the operators take the 199-emergency calls, make a note of the details with regard to an emergency and forward these data to the dispatchers. However, episodes B and C indicate that control operators undertake a far more serious role than the one cast to them. Operators receive via a technical channel, mentally reconstruct and verbalize whilst transmitting via another channel the information received (figure 3). So operators do not merely communicate facts; they provide advice. They occasionally replace dispatchers in their absence. So when operators assume their duties, they tend to merge two distinct roles: the operator's with the dispatcher's. This merger explains the distance between what the rules dictate and how the operators act.

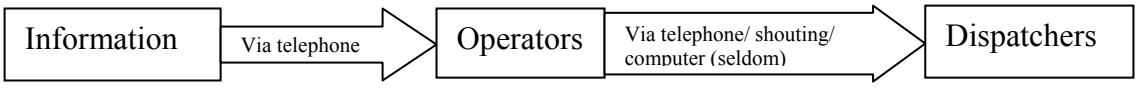


Figure 3: The diffusion of the incident information

In both B-1 and C-1, it is unnecessary for the communicators to identify themselves. Operators introduce the information they intend to transmit by addressing the dispatcher: "pal" or "George". "Pal" is a friendly way to address a "colleague" and it is very often used amongst co-workers, especially when they want to soften the advice that follows, which is frequently expressed abruptly. The operators' advice is grammatically an order: the verb is used in imperative mode and resembles a colloquial expression related to commerce. In the past, merchants would use a similar expression to advertise their merchandize. When control operators have provided their advice, they then transmit the essential information for initiating the mobilization of the organizational resources. Thus, the confusing of the boundaries between the roles of the control operator and the control dispatcher confuses the priorities the operators should have when transmitting the information.

The degree of accuracy of the information received and forwarded by the control operators changes the nature of how repetitions are used in the conversations between operators and dispatchers. In B, repetitions indicate the operator's impatience to end the conversation.

Moreover, in order to put an end to the conversation, the operator identified the source of information: the night-guard as a witness is more reliable that an automatic alarm system, especially in the Hellenic cases. Automatic alarms may be faulty and alert the fire service, yet the companies that install the alarms are not fined. Therefore, they neglect to correct their systems and as a result the systems continue to malfunction. In C, however, the operator either did not received accurate information or he did not comprehend the information provided and, thus, the use of repetition becomes essential to reconstruct the content of the information.

The dominant linguistic characteristics of the C 1-12 conversation between the operator and the dispatcher are the elliptical construction of the utterances and the inconsistent narration of the content of the information. Ellipsis in this conversation is linguistic, semantic and pragmatic. Ellipsis on the linguistic level is almost anticipated by the communicators and does not frustrate or irritate them as the content of the information is gradually revealed through a succession of questions and replies. The elliptical construction of the utterances reveals that tacit knowledge is used as the basis for communicating. Communicators know that "Lampraki" is a street as they know that "take out" refers to appliance. On a semantic level, the operator answers the question "What is it?" by revealing not the type of incident: "it is a fire", but the risk: "in a factory" (C-3). Tacit knowledge, as the accumulated experience from the employees interacting in the workplace, contributes in assessing the content of the information forwarded. It shapes the linguistic choices of the organization-members and facilitates the understanding of the context of the messages exchanged. What *usually* happens – "we get a lot of hoaxes from there" – is a *tool* that personnel use to assess the validity of the information: is the information a *hoax*? The operator has no means of verifying the validity of the information before the appliances reach the fire-scene. However he ascertains that *it isn't* and, in addition, he claims that the fire is "big." What is the source of his certainty? The inconsistent and incoherent narration that follows indicates uncertainty rather than certainty. The operator is unable to answer most of the dispatcher's questions. Yet it seems from the words he so inarticulately utters that the civilian provided him with some details with regard to the incident that he is unable to recall. The operator may have also neglected to ask questions necessary to the mobilization while conversing with the civilian. Either or both of the aforementioned reasons provided to explain the operator's inability to describe the emergency reported constitute a pragmatic ellipsis.

Information requires a longer time to reach its "final" destination, those people who manage the information and convert the external stimuli – the data provided by civilians or organizations – to organizational performance (figure 4).

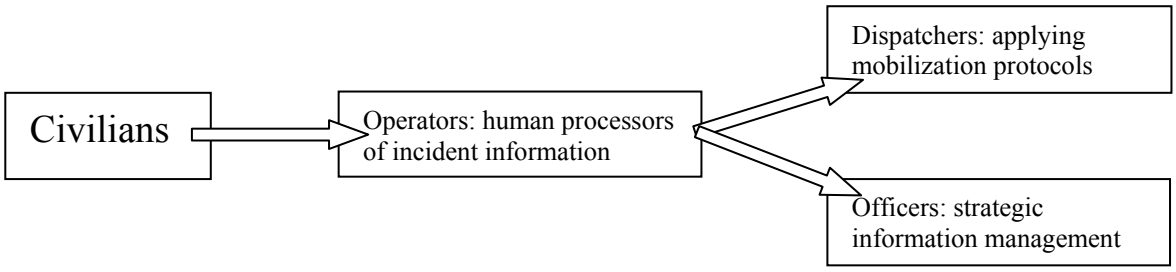


Figure 4: The roles of the actors involved in the dissemination of the incident information

Moreover, when actors are cast more than one role, they tend to confuse them. Such confusion affects their priorities when they undertake certain tasks. The extent of this confusion depends on the nature of the emergency as well as the experience of the operators engaged in the process as it appears to depend less on the existing rules of the control room.

5.3. The communicative interactions between the dispatchers and the station operators

The interactions between the control dispatchers and the station operators are essential to mobilizing the organizational resources. Station operators are the intermediaries between the information received by control employees and the action taken on the incident-scenes (figure 5). Control dispatchers convert the incoming information with regard to *what* is happening and *where* into *how many* appliances and *what* type. The parameters of this conversion are a set of informal operating procedures, such as the memorandums of action, and the dispatchers' experience. As a result, in at least three of the episodes examined, the network of land telephony was either incapacitated or malfunctioning. Thus, dispatchers were unable to either contact the station operators or, when they managed to contact them, the noise hampered the reception of the message. The mobilization depends primarily on the verbal communication between dispatchers and station operators.

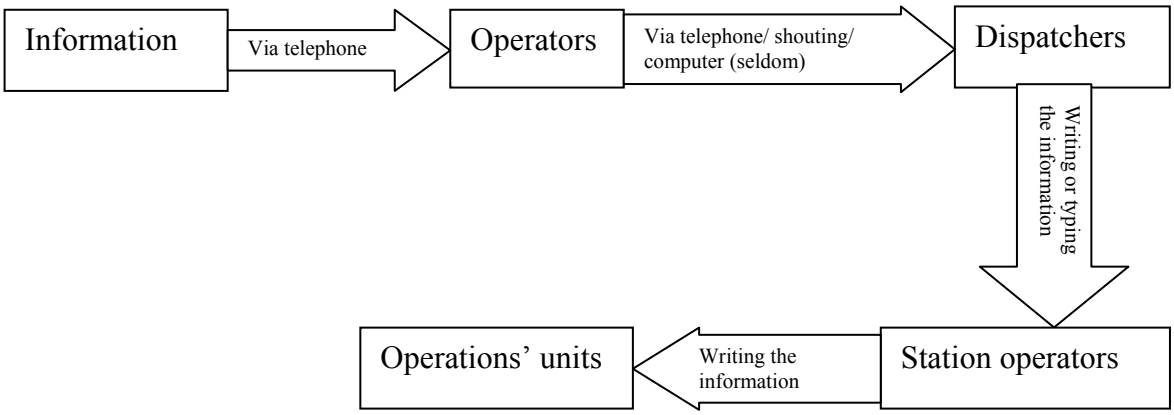


Figure 5: Incident and organizational information: The route of conversion

The content of the communication conduct between control dispatchers and station operators is standardized: the control requests resources and the stations mobilize the available appliances. This transaction acquires certain characteristics: the exchange takes place between actors that represent their departments. Control dispatchers are engaged in the process as control; station operators as the fire-stations they are employed in (B, 6 and 10; C, 48). Dispatchers, who instigate the communication process, seldom identify themselves. They consider themselves to be a higher-authority than the station operators (C, 59; 63; 65; 68; 70). When station operators answer the telephone calls made by control dispatchers, they identify themselves by providing the number of the fire-station: "9^{th}", that is: "This is the 9^{th} fire-station". The metonym deprives the communicator of his/her individual identity and the ellipsis signifies the economy in the speech that indicates the instrumental and impersonal character of the exchange. Both communicators know that the number "9" refers to the station. Station operators neglect to identify the fire-station when dispatchers utter their request as soon as the operators pick up the receiver (C, 13); it is evident that first, the transmitter is aware of who the receiver is and, second, who has authority over whom.

Repetitions as well as ellipses emerge as a rather frequent linguistic pattern. Repetitions are used when he/she who receives the information cannot clearly hear the message transmitted (i.e.: C, 13-34) or fails to understand the content of the message (C, 35-47). It is also the case that the receivers of the message – in this case the station operators – prolong the conversation by repeating the message or parts of the messages exchange so as to avoid the misunderstanding of the content of the message forwarded to them due to the

fact that often dispatchers may simultaneously contact more than one station operator and are engaging in radio transmissions (B, 10-27). This multitasking disorients dispatchers. When station operators repeat their questions in order to re-engage the multitasking dispatcher to their conversation, the dispatcher usually re-enters their dialogic abruptly (B, 17) by repeating the type of the incident rather than providing an answer to the station operator's question. The dispatcher is in a rush to communicate the information to all those he is about to engage in the emergency response. So whenever he is asked a question, his hastiness is expressed via the repeating of his answer. On the other hand, the station operators appear to be more relaxed. They do not share the same responsibility as the dispatcher, who is obliged to communicate with a number of station operators via telephone and operations' crews via radio simultaneously especially in the beginning of the mobilization process.

The use of repetitions is also utilitarian. When dispatchers are repeating the answer provided by station operators, they are buying time to think about alternative solutions. The repetition of the word "nothing" (B 61-68; C, 23-28) served the dispatcher to buy time to think about his next move. Finally, station operators repeat the information to themselves in dictation speed so as to take it down. Nonetheless, this process appears time-consuming and causes irritation to the dispatchers who are in a rush to conclude their conversation.

Temporal adverbs are frequently used by dispatchers as means to describing the mode of action that operations' units should take: e.g. rapid (B, 21). Their use has a phatic function (Jakobson in Barthes 1981) with a metalinguistic value (Barthes 1981). Phatic, because temporal adverbs are used as 'filler phrases' that serve to establish, prolong or discontinue communication. Dispatchers forward a piece of information concerning an emerging incident and employ adverbs to issue an order with regard to how operational fire fighters should react, i.e. promptly (episode D). The context of the adverbs used assumes an additional metalinguistic value. It indicates the tacit knowledge that dispatchers acquire over a period of working in the HFC with regard to some operations' units taking their time to leave their fire stations after having been alerted to attend to an incident.

Shortage in personnel, such as the lack of eligible drivers to operate specific type of appliances or fire-fighting personnel to staff the fire-engines, and the carelessness of the station operators to provide the CCC personnel with valid information, resulted into an aggravation of the climate in which the conversations primarily between dispatchers and station operators were conducted (C, 48-66). The dispatchers' irritation resulted into a breach of the set of rules that define the roles of the participant actors in emergency responses (C, 59).

Nonetheless, control dispatchers' authority over station operators is fictitious. Both have a certain role to perform in the mobilization process; neither is responsible for the scarcity of resources. The dispatcher requests resources, the station operator does not have any available resources to provide. He is not responsible for managing the resources, therefore, he cannot be held accountable for not providing them. So, when a dispatcher threatens to "do something" to a station operator, he cannot really do anything but bully him (C, 60-66; 67; 68-86). Rules do exist to alleviate the tension but they are not applied because nobody monitors the communicative interactions of the actors involved in the emergency response and therefore the tensions remain unidentified and unaddressed.

The carelessness or negligence of station operators to provide dispatchers with valid information challenges the attitude of dispatchers towards them (e.g. A, 107-115). They usually mistrust them and, thus, they re-contact them to make sure that their instructions were followed by the station operators. Episode C reveals the extent of the unilateral mistrust: the dispatcher anticipated that his request to mobilize a 12ton appliance would have been processed (C, 68-85). So, he called to verify that the appliance had left. Nonetheless, the dispatcher's request was not processed. A chain of insults began. The dispatcher repeated his request and thought he provided a viable solution to the main problem: the lack of drivers (C, 72). The station operator was lost for words. He attempted an explanation that failed to convince the dispatcher. He then conveniently pretended that there was noise in their communication channel (C, 77). However, the recordings indicated that the telephone line was clear. The station operator tried another explanation, which underlined another problematic issue: the process of changing shifts. The employees are relieved from their duties only when their replacement is ready to assume these duties. That day, one of the on-duty drivers left earlier and his replacement had not at the time assumed his duties. Moreover, the station operator clearly frustrated by the conversation

appeared unaware with regard to the whereabouts of the appliances missing from the station. Eventually, the station operator called the on-duty officer to continue the conversation with the dispatcher. Officers are usually the ones to manage the station personnel and it is expected that dispatchers – being sub-officers – would not raise their voice to an officer. This was not the case during episode C (90). The climate had already been aggravated and the dispatcher did not intend to let such misconduct go.

5.4. The role of the control officers

One of the principles of the ICS is the unobstructed flow of information among the responders on- and off- the incident-grounds. The Hellenic episodes indicate that the status difference between the lower- and the higher-ranking officers interfere with the dissemination of the incident and the organizational information.

The habitual HFC practices show that as soon as on-duty control officers receive the incident information, they communicate it to the control administration; the control administration indicates who to contact from the command structure, e.g. district commanders, deputy chief and chief fire-officer; and, finally, they instruct the dispatchers as to what resources to mobilize based primarily on the instructions provided by the highest-ranking officers (A, 76-77) and secondarily on the emergency protocols, where and when they apply.

During the emergency responses, control officers contact the operations' officers or units on the incident-grounds so as to monitor the progress of the response. When control and operations' officers are of the same rank, the customary polite greetings between communication actors appear to become redundant. The dialogue may often be an unadorned and laconic exchange of the initial necessary information (i.e. A, 51-56). Moreover, when control officers are on the phone with operations' officers of the same or lower rank they usually interrupt their conversation to accept the phone calls placed by higher-ranking officers (D, 36-52).

The use of pronouns along with the positional title of the higher-ranking officers corroborates the submissiveness of the lower-ranking personnel (e.g. A, 95). It also reveals the intention of the lower-ranking to familiarize with the higher-ranking officers. The latter keep the distance between the *lower* and the *higher*. At least one of the senior officers addressed Yannis, a high-ranking officer, by his first name when he instructed one of the lower-ranking control officers to contact Yannis. He then immediately corrected himself and after uttering Yannis' first name he also added his surname: Mr. Z (A, 58). So, the shift in addressing the senior fire-officer from his first name to his surname maintained the symbolic distance created by the distribution of power in the existent hierarchical system. The status of the rank-holders is clear. The deputy commander of the CCC contacts the chief fire-officer whereas the lower in the command structure of the CCC watch officer contacts the lower-ranking operational fire-officers (episode A).

High-ranking do not feel obliged to report to lower-ranking officers. Thus, they do not forward any incoming information with regard to the progress of the response. Occasionally, lower-ranking officers indulge such practices (A, 79). High-ranking officers contact lower-ranking personnel when they request them to undertake certain tasks in the mobilization process (A, 77) or when they wish to be informed about the progress of the response (B, 34-53).

In most of the conversations between lower- and higher-ranking officers the content of the information is gradually revealed. The transmitter is waiting for the receiver to acknowledge that he/she has understood the information transmitted (A, 81-94) and, thus, repetitions are deliberately used to verify the correctness of the content of the information exchanged (A, 64-69). As in the equivalent 'yeah, yeah, yeah' in English and as the abrupt 'ya' in German, in the Hellenic case, the constant use and repetition of the word "yes" is not always employed as an affirmation. Its occasional phatic function contributes to prolonging a conversation and it may be used either as a greeting, or to acknowledge comprehension or to emphasize the information exchanged (B, 37).

The nature of the conversations between the on-duty control officers and the administration of the CCC is slightly different. When the on-duty officers contact their superordinates they use the positional titles and the customary greetings but they may also use foul

language to express their criticism with regard to the decisions made on the incident-grounds (B, 37), which they normally would avoid when addressing the higher echelons of the command structure. On the one hand, the use of profanity is the systematic deformation of the forms of rituals and the expressive accomplishment that allows the slanderer to ridicule his opponent (Bourdieu 1999: 105; 1991: 113). On the other hand, in the Hellenic case, it is also a pattern that indicates the transition from a formal to an informal way of affiliating; a form of intimacy, affection and friendliness. Profanity facilitates the manifestation of familiarity that derives from the constant cooperation among on-duty control officers and the administration of the CCC.

The majority of conversations reveal that when the initial information is verified, communicative interactions become more instrumental (A, 81-88). Requests and replies are laconic and precise. When the content of the incident information is not verified, the narration becomes inconsistent (A, 81-94; E, 34-38). Control officers avoid replying directly to the questions posed by their communicators (E, 37-38). In their effort to be precise they interweave certainty with uncertainty within the context of one sentence (A, 74). When control officers have failed to comprehend the incident information they resort to repeating verbatim what they are told (E, 3; 8; 36).

The lack of coherence intensifies the mystery of the potential crisis (E, 39). From "there must be a very serious incident" to the actual announcement of the "serious incident", the control officer asked the high-ranking commander with whom he was conversing if he had heard "something" about the incident from other sources. These choices of revealing significant information disclose that the transaction of information among higher-ranking officers acquires a different value from the transmission of information among lower-ranking personnel. In the Hellenic case, officers operate on a *quid pro quo* basis, whereas lower-ranking employees, such as sub-officers and fire-fighters, simply forward any incoming information. This inconsistency in the flow of incident information indicated first, that the control officer who communicated the incident information to the control administration lacked communication skills. Second, it revealed that the various scenarios with regard to the plane-crash (e.g. terrorist act and hijacking) were interwoven with the facts. So, the content of the information was both factual and fictional: a certain plane crashed at a certain place and certain number of people perished. At the same time, "it is

said that" it may have been an act of terrorism etc. "It" marks the absence of a valid source of information and draws away from reality.

What emerges from the conversations examined during the HFC emergency responses is the large number of mediators between the initial information received and the action instigated by control employees. The existence of numerous mediators obstructs the decision-making process with regard to the mobilization of the fire-fighting resources and the timely response, due to a superfluity of the communicative interactions. The command structure is notified even when the notification of higher-ranking officers is not essential to the mobilization process (episodes A, B). Thus, as indicated in the selected cases, each of the mediators expresses their opinion concerning the mobilization as they add their own assessments with regard to what is "necessary" to dispatch. This phenomenon, that may hinder the initial mobilization processes, emerges more during the full-deployment phase of the mobilization as operations fire-officers, deliberately or unintentionally, undermine each other's decisions on the incident-grounds.

5.5. Conclusion

The communication conduct between control employees and operations' personnel indicate that tacit knowledge overpowers the existing SOP. The material discussed here shows that the dissemination of information lies upon the interacting agents usually unmediated by technology and un-objectified. When the information is not registered in a commonly accessed inventory, such as a software program, the context of the information may be altered or lost and its flow confused. Next to the distorted context and the confused streaming, when the source of information is unclear, the processing and assessing of that information is delayed. Furthermore, it appears that information in the HFC, acquires a symbolic value reflected in the status of the organization actors engaged in the streaming of information; occasionally explicitly expressed (E, 95).

The volume of communication nodes: the control operators, dispatchers, and officers, the station operators and the command structure, as well as the untimely, inaccurate and incomplete registration of information, may also disrupt the communication processes and

distort the meaning of the information. The interaction between the dispatchers and the station operators is an ongoing negotiation process. The rules of engagement in these negotiation processes are either non-existent or unclear. These processes are aggravated due to the absence of regular performance auditing. Only at this stage are the communicative interactions between organization-members rather brief, striving to attain an instrumental character. However, it is the conversations per se that are brief, not the background communication conduct that take place in between the conversations with the station operators.

The lack of SOP favours the hierarchical system. In turn, the decision making process is centralized and the posts lower-ranking personnel hold are degraded. This unofficial, yet habitual, undermining of roles leads the lower-ranking personnel to being less interested in the tasks they perform. Moreover, managing the resources of the organization proves rather difficult due to pre-existing problems. Lack of personnel, training and unattended technical problems hinder the mobilization process. The unreported capability of the fire stations contributes to this.

These routines and communication practices developed among the control personnel and between the control and the operations' employees indicate that power is authoritarian rather than negotiated. Lower-ranking officers comply with the instructions of the higher-ranking employees; station operators conform to the requests of the control dispatchers. In Weberian terms, the legitimate holders of power are not the set operating procedures – how things should be done – but what the higher-raking officers or, more generally, the personnel holding a higher status, dictate as what will be done. As indicated in the preceding chapter, if the structures of the organization allowed power to be negotiated, employees with expertise would have a different status on both an administrative and an operational level. If this were to happen it is reasonable to suppose that greater effectiveness in organizational performance would be accomplished.

CHAPTER 6

THE CASE OF THE UK BRIGADES

The British Fire and Rescue Services (BFRSs) communication practices differ from the HFC emergency conduct. This chapter examines the BFRSs actors' involvement in emergency responses and the exchange of incident information as a means to managing fire and rescue operations effectively.

6.1. How the emergency communication is instigated

Civilians are aware that in order to report a disruptive incident, they should call the emergency number 9-9-9. The call is then forwarded by the British Telecommunications operator to one of the first-responder organizations: police, fire or ambulance services, depending on the type of the incident reported (figure 6). When all the available lines in the BFRSs CCC are occupied, the calls are directed to the police CCC. Moreover, when a non-English speaker dials either 1-1-2 (the European emergency number) or 9-9-9 (the 1-1-2 in the UK dials as 9-9-9), the operator initiates a conference call with a qualified translator provided within a minute by the national interpretation service (NIS). This three-way conversation initiated by pushing the NIS button on the operators' monitors is introduced to address the "needs of the ethnic minorities in [Britain] that use their own languages."[69] First-responder organizations and the BT Group have developed the technical infrastructure in order to ensure that the flow of the incoming incident information is not interrupted either by congestion or by the cultural idiosyncrasies of those who communicate the emergency information.

In the small-sized BFRSs, the roles of the control operator and the control dispatcher are merged. Operators/dispatchers receive incident information and attend to instigating the mobilization process. In the large-sized BFRSs, operators receive and register incident

[69] Control fire-officer, pers. comm., 23 March 2007.

information and usually one – or more, depending on the number of the radio frequencies used – designated dispatchers instigate and monitor the mobilization process. The large-sized services regularly attend to numerous simultaneous incidents and therefore they divide the tasks undertaken by the operators who deal with the extra-organizational communication and the dispatchers who monitor the intra-organizational emergency conduct.

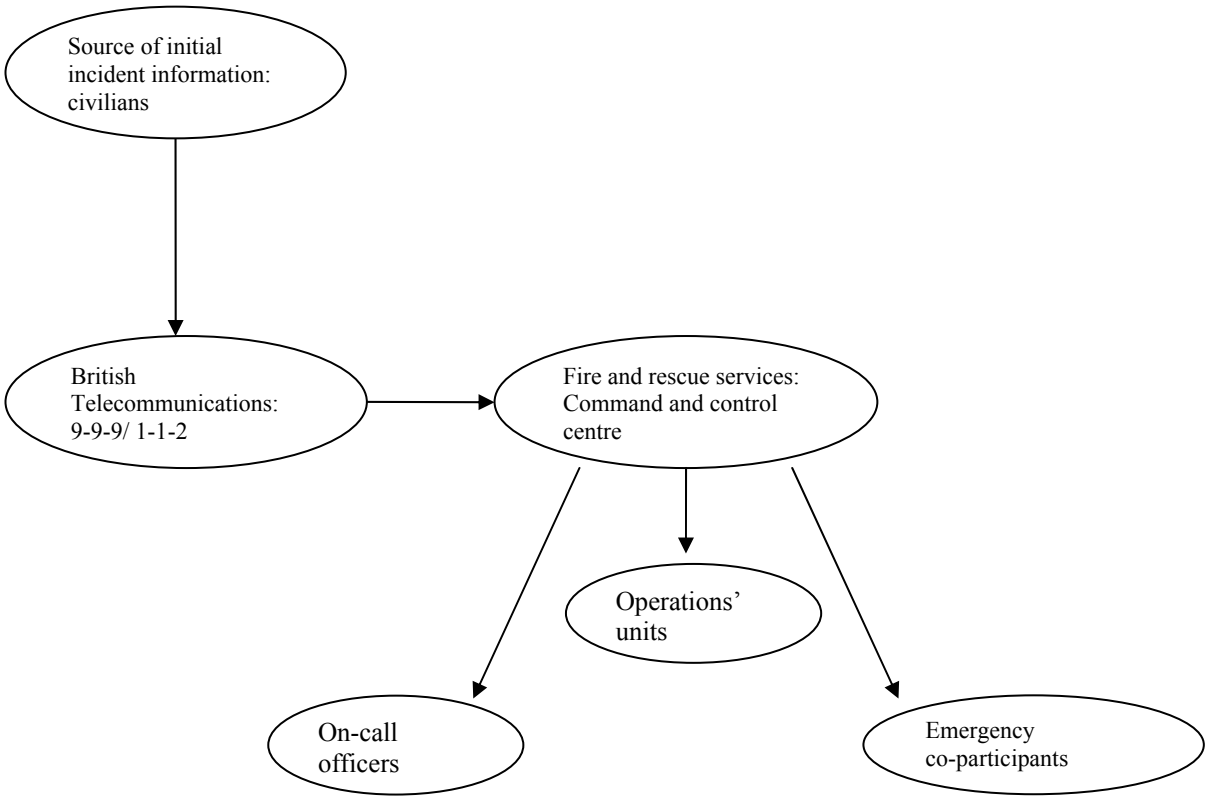


Figure 6: The dissemination of the initial incident information

The control room "assembly-line" functions as follows: as soon as control employees receive and register the incident information, their software system indicates the type and number of appliances to dispatch to the incident-grounds (figure 7). Through the software system the operators instigate a set of automatic notification procedures that have replaced interpersonal communication, thus introducing a degree of objectification in the process of disseminating the initial incident information. The alert in the fire station(s) is set off, the

voice of a control operator announces via a loudspeaker the type and the location of the incident, and the available incident information is faxed over while operations crews are preparing and mounting their appliances. The appliances transmit an electronic signal that signifies: their departure from their fire station(s), their arrival to the incident-grounds, their departure from the incident-grounds and their return to their fire station. Between arriving to and leaving the incident-grounds, the IC delegates a fire-fighter, usually the driver of one of the appliances, to hold the communication with the control personnel.

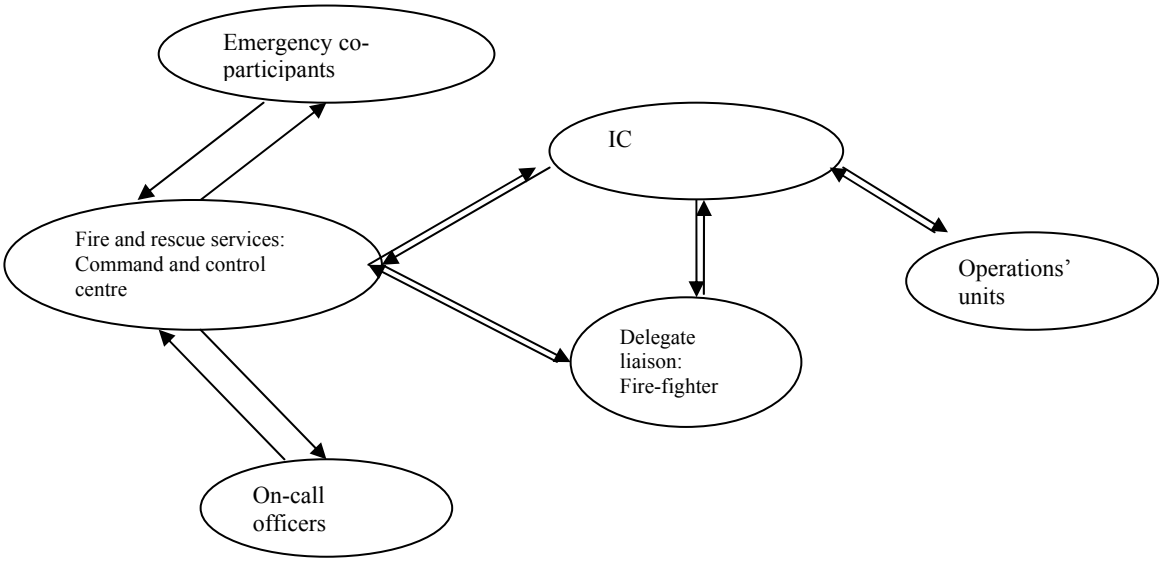


Figure 7: The incident information exchange process after the initial mobilization

The electronically registered standard mobilization procedures – namely the type and number of appliances required to respond to a certain type of emergency – are designed based on: the number, the type, the location of the fire-engines as well as the risks entailed in a specific geographic area, for example nuclear plants, oil depots etc. Control personnel do not negotiate the number and type of the fire-engines necessary to proceed to the incident-grounds. Neither do they negotiate whether the appliances carry the necessary equipment they are assigned with. Control employees assume and expect that all fire-engines are accounted for and in stand-by mode unless operations' personnel indicate differently. Thus, the element of uncertainty with regard to the fire and rescue services' capacity in organizational resources is minimized.

One of the most significant tools towards managing organizational resources is the electronic map (EM). This board facilitates BFRSs control personnel to visualize the location of the fire stations and the status – mobilization and demobilization – of the resources: assigned appliances, available resources and the out-of-service engines. The first category refers to the fire-engines deployed on-scene under the direction of a supervisor. The second indicates those appliances that are stationed and ready to be deployed. The third, designates those fire-engines that are in the process of re-supplying, or experiencing a shortfall in staffing, or their operations crew is resting or they are damaged, and, thus, inoperable. All three status categories are differently coloured when pictured on the EM. In one case (EFRS2) that the electronic system was out-of-order, the control employees were confused: "I am lost without it."[70] Control employees were unable to quickly and easily detect which appliance from which station was at what incident, and what the status of the appliance was, i.e. stand-by, responding, etc. This, however, indicates, first, that control employees need to create a mental picture so as to be able to visualize the mobilization process (Weick 1993; Bigley and Roberts 2000). Second, it reveals that they experience difficulty in adapting to non-customary circumstances.

So, control employees expect the operations' personnel to signal their status and every successive change in their status as soon as it takes place, and to inform the control employees with regard to the conduct on the incident-grounds and any change that takes place during the emergency response. If the aforementioned expectations are not fulfilled, then the *assembly-line* breaks down, communication is disrupted, incident information is incompletely exchanged, and conflicts between control and operations' personnel arise.

The following drawings (figure 8) indicate the position of the communication actors within the command and control centre of the BFRSs studied. Their position in connection to each other and the EM reveal the control actors roles in the information exchange and the decision-making process, as well as the exercise of control over incident and organizational information and between superordinates and subordinates.

[70] Control supervisor, pers. comm., 14 April 2007.

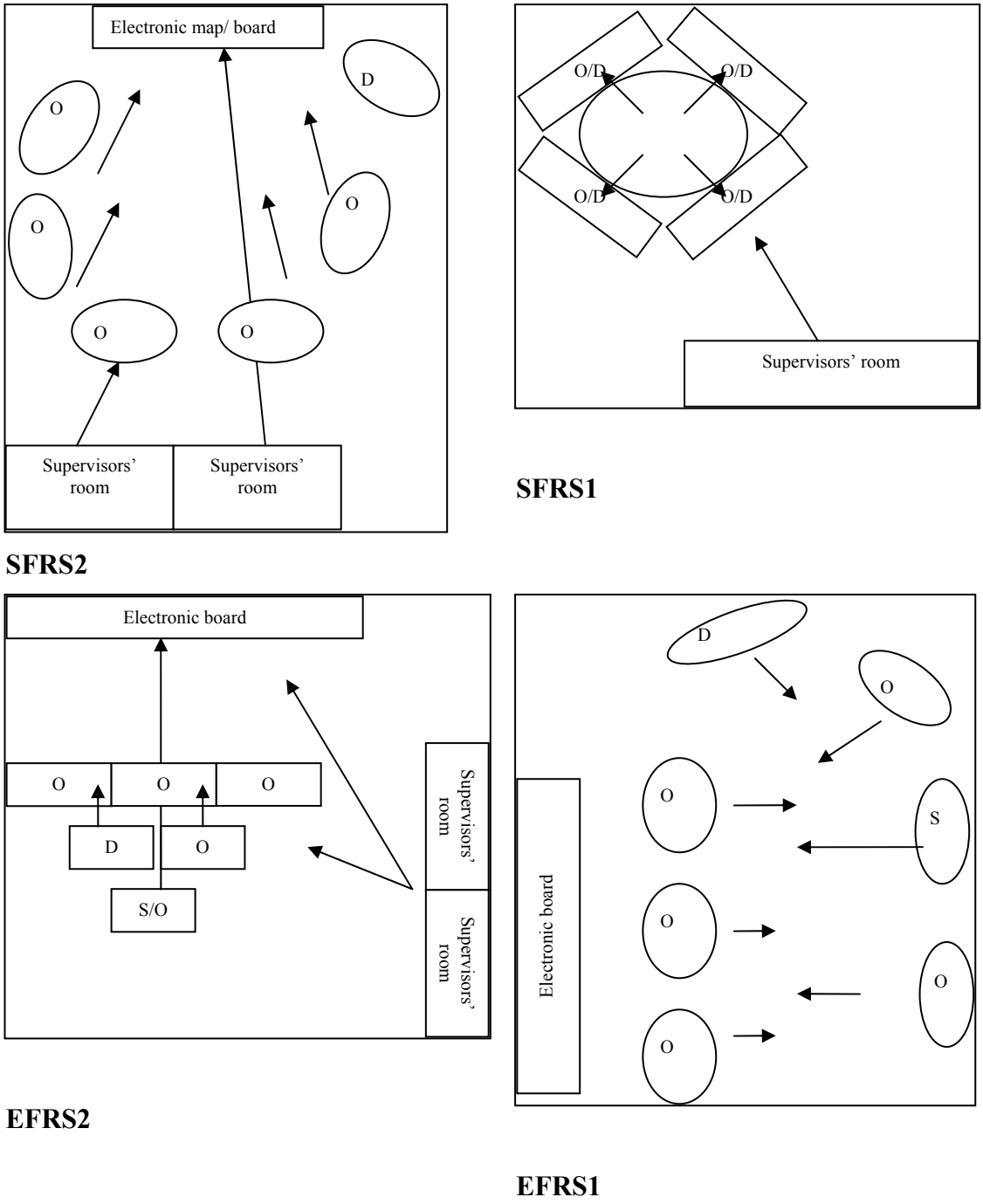


Figure 8: The positioning of the control employees in the BFRSs control rooms

In both the EFRSs and the SFRS2, the largest fire and rescue services studied, the control superintendents oversee the control operators, the dispatchers and the EB. The dispatchers have limited or no sight of the incident and the organizational information on the EB. They are primarily preoccupied with registering the information the appliances forward to the CCC and with allocating and re-allocating the resources according to the emerging incidents. The operators usually have sight of the EB. Their role appears to be significant

as they elicit, register and assess the initial incident information so as to retrieve the respective mobilization protocols from their electronic archives. The dispatchers appear to be mediators between the incident information and its conversion to organizational information. In the SFRS1, one of the smallest FRSs investigated, operators/dispatchers are circularly allocated. Their positioning in the control room shows that they share a similar professional status. The circular arrangement also indicates intimacy and direct decision-making rather than a multi-level filtering of incident and organizational information. In all the BFRSs examined, the supervisors' or officers' room establish visual control over both the employees and the incident information (table 5).

Table 5: The significance of the positioning in the control rooms

	Supervisors/ Officers	**Dispatchers**	**Operators**	**Allocation of personnel**
EFRS1	Oversee personnel and EM	No direct visual of EM/ isolation.	Some of the operators have no direct visual of EM.	Quasi-circular
EFRS2	Direct control over EM.	Direct control over EM.	Direct control over EM.	Pyramid
SFRS1	Direct control over EM.	Direct control over EM.	Direct control over EM.	Circular
SFRS2	Direct control over EM.	No direct visual of the EM/ isolation	Direct control over EM.	Quasi-circular

6.2. How the CCC interacts with civilians

"What happens" and "where it happens" is the basic incident information necessary for the fire and rescue services to start dispatching their appliances to the incident-grounds. Control personnel are trained to deal with eliciting essential incident information from civilians. They do not receive the same training as operational fire-fighters. They are specialized in managing the communications conducted via the command and control centre of the fire and rescue services. One of the main priorities of the control employees is that they persist and insist on extracting as much information as possible from civilians.

The following examples illustrate how the communication conduct between control operators and civilians usually take place.

BFRSs operators receive the call that the BT operators forward to the control. On their monitors, information such as the telephone number, the address and the name of the individual under which the number is registered are shown. Case A illustrates that a civilian contacted the 9-9-9 in order to report that a cow was trapped in mud created by a heavy rainfall. The conversation between the control operator and the civilian was recorded as follows:

1	**Civilian**	***Hello.***
2	**COP**	***Hello there.*** **[The CO asks where the place is]** ***please.***
3	**Civilian**	***Z. Do you know where the*** **[he is describing the area near his farm]*?***
4	**COP**	***Yes*** **[uttered with reluctance]…**
5	**Civilian**	**[Brief repetition of description]** ***back of there.***
6	**COP**	***Right*** **[the CO had time to locate the area on the map].** ***So is that on the back road to the*** **[here the operator mentions the name of the road]** ***road?***
7	**Civilian**	***Yes.***
8	**COP**	**[The CO goes on naming another couple of places nearby so as to be certain of the range within which the fire-fighters can look for the farm].** ***It is just a single cow it is trapped.***
9	**Civilian**	***Just a single cow, yes.***
10	**COP**	***… that's trapped in some mud.***
11	**Civilian**	***Yes and there is no way I can get*** **[illegible]** ***near it.***
12	**COP**	***Right, ok, that's fine. There is no water or anything round about. It's…***
13	**Civilian**	***Yes*** **[illegible]** ***it's in mud and water.***
14	**COP**	***Right. Is there a river or anything within by or is it because of the rain that…***
15	**Civilian**	***It's because of the rain.***
16	**COP**	***Right that's fine.***
17	**Civilian**	***Tricky grounds you see.***
18	**COP**	***That's fine. We'll certainly send something out to rescue.***
19	**Civilian**	**[illegible]**
20	**COP**	**[The CO repeats that "the boys will be coming"]**
21	**Civilian**	**[Exchange of acknowledgements].**

(Source: SFRS1, December 2006)

Case B depicts the conversation between a control operator and a civilian just after a fire erupted in a two-storey dwelling:

1	**Civilian**	***We have a fire at* [location], *Y* [Street], *Z* [area]**
2	**COP**	**[She asks for the address again] [SFRS CCC operator]**
3	**Civilian**	**[He repeats and adds the post code]**
4	**COP**	***Can you spell that for me please?***
5	**Civilian**	**[he spells the name]**
6	**COP**	***And where was that?***
7	**Civilian**	**[He provides the rest of the address]**
8	**COP**	**[She repeats the name of the road]**
9	**Civilian**	**[He adds the name of the area she hasn't repeated]**
10	**COP**	***And what's on fire?***
11	**Civilian**	***It's a house; there are a couple of explosions in the bedroom.* [illegible]**
12	**COP**	***That's fine. Did everybody get out* [the tone of her voice picks up]*?***
13	**Civilian**	***Yes, we are all outside* [his voice is reassuring]**
14	**COP**	***Right. If you stay out and the fire brigade will attend.***

(Source: SFRS1, April 2003)

Case C reveals the communication conduct between a civilian and a control operator a few moments after a fire started in a dwelling.

1	**Civilian**	**[Illegible; coughs] *the house is on fire in Z.***
2	**COP**	***I am sorry?***
3	**Civilian**	**[More concentrated] *the house is on fire in Z.***
4	**COP**	***Z, where is that?***
5	**Civilian**	**[He gives the name of the area].**
6	**COP**	***Is that the farm Z?***
7	**Civilian**	***Yes, aye.***
8	**COP**	***And your house is on fire?***
9	**Civilian**	**[Coughs].**
10	**COP**	***Is everyone out of the house already?***
11	**Civilian**	***Aye I've got everybody out now.***
12	**COP**	**[the line of questioning continues]**

(Source: SFRS1, December 2006)

Case D indicates the communication conduct between a control operator and a civilian who was panicking due to a chemical fire that erupted in a garage.

1	**COP**	***I am calling from the fire brigade.***
2	**Civilian**	***Yes* [panicking; out of breath]**
3	**COP**	***What's the address* [of the incident]*?***
4	**Civilian**	***X* [almost illegible].**
5	**COP**	**[Illegible] *sir you phoned the fire brigade.***

6	**Civilian**	***Yes* [illegible].**
7	**COP**	***What's the address?***
8	**Civilian**	***X. Y garage.***
9	**COP**	***And what's on fire?***
10	**Civilian**	***Chemicals***
11	**COP**	**[Illegible, he is breathing heavily trying to say something. The CO is repeating the location given] *You know what kind of chemical* [she asks twice].**
12	**Civilian**	**[He is not answering. Out of breath] *they are resins.***
13	**COP**	***Resins?***
14	**Civilian**	***Yes.***
15	**COP**	***Ok* [she repeats the location given and what is on fire] *ok. That's fine* [the rest illegible].**

(Source: SFRS1, April 2006)

The following extract is one of the following up calls placed to the control room of the SFRS1 with regard to the garage fire.

16	**2nd caller**	***Has it been reported?***
17	**COP**	***It has.***
18		**[CO asks but the caller had nothing more to add]**
19	**3rd caller**	***It's a big fire; I am not quite sure whereabouts it is. There is a lot of black smoke […]. It's exploded. It's behind the park in Z* [name of the area].**
20	**COP**	***Is it near Y* [name] *garage?***
21	**3rd caller**	***Oh, yes…* [the caller is asked but has nothing more to add]**

(Source: SFRS1, April 2006)

Case E illustrates the conversations between a civilian announcing a fire in an unoccupied building that used to host a school.

22	**Civilian**	***I think there is something at School, Y road,* [his name]*; there is a lot of smoke and I have seen flames.***
23	**COP**	***You know what's on fire?***
24	**Civilian**	***Sounds like the house […] Looks like the house.***

(Source: SFRS1, October 2006)

Case F shows the communication conduct between a civilian witnessing a road traffic collision and a control operator.

1	**Civilian**	***I need the fire brigade, the ambulance and the police.***
2	**COP**	***What's the problem?***
3	**Civilian**	***There's been a car accident… oh! The police and the ambulance are just arriving… between the and Y road***
4	**COP**	***Where about is this?***
5	**Civilian**	***I don't know where […]***
6	**COP**	***Is anybody trapped?***
7	**Civilian**	***George?! Anybody*** **[illegible]** ***Aye.***
8	**COP**	***You want me to give you my mobile.***
9	**Civilian**	***We'll call the control and get the details.***

(Source: SFRS1, November 2006)

Control operators focus on: first, establishing the exact location of the incident in order to minimize the time of intervention. Second, they are interested in the type of the emergency, e.g. fire in factory, road traffic collision etc., so as to give operations crews time to consider the tactics they will follow once on the incident-grounds. Third, control personnel intend to make sure that civilians have safely evacuated the affected premises by the time of the call. So, control operators repeat the location provided by civilians, verify the civilians' replies by using their electronic maps and repeat the verification of the location before moving on to discuss the type of the emergency reported (A, 2-8; B, 1-9; C, 1-7; D, 1-8 and 11 and 15). In case D, the COP repeated the location two times more than the usual repetitions because the civilian appeared to be in a state of panic. After the incident-ground is effectively located on the EB, the COP requests information with regard to the type of the emergency (A, 8-9; B, 10-12; C, 8-9; D, 9-15). A succession of requests and replies follows with regard to the circumstances under which the emergency occurred in order to make sure that the fire-fighters be prepared for the equipment and plan their response according to the facts reported by the civilians (A, 10-16).

Repeat calls provide the control operators with the opportunity to verify the location of the incident that previous callers have provided and to make sure that the caller is not referring to a similar incident located in a nearby area, which did occur in two of the SFRS1 cases. When a control operator contacted the on-call officer in the morning with regard to fire that erupted in a dwelling, the officer replied: "You are joking!", a comment that reflected

his surprise, frustration and fatigue about the fact that he was attending an emergency response throughout the night in an area that had the same name as the location where the fire erupted the following morning.

Repetitions emerge as a useful pattern in establishing *visualization* and *realization.* The concept of visualization refers to creating a mental picture with regard to the emergency. Control operators try to fit the pieces of the puzzle that is the fragmented information provided by civilians. D11 and D13 indicate that control operators' persistent questions with regard to the kind of chemicals involved in the fire shifted the civilian's attention from the picture of the burning building to the specifics of the fire. From visualizing the emergency to realising the response, control personnel aims at extracting as much information as possible from civilians. And so they insist on asking questions and repeating civilians' answers. Depending on the burning chemicals, the CCC personnel of the fire and rescue service assess the gravity of the situation in different ways: they either mobilize the regular appliances and advise operations' personnel to proceed with caution, wearing their regular uniforms and carrying their breathing apparatuses; or advise the personnel to proceed wearing special chemical suits; they may also advise them to use either water or specific types of foam. After conversing with specialists or officers on-site, control personnel may even mobilize a decontamination unit and evacuate the area in close proximity to the incident-grounds. Therefore, naming the burning substance is a critical factor in assessing the type and number of appliances mobilized on the incident-grounds, the resources used, and the tactical mode of responding to the incident.

At the end of this sequence, instructions are occasionally provided by control operators so as to ensure the safety of the civilians in close proximity to the incident-scene. The length of the conversation between control operators and civilians is usually 15 lines of successive standardized and repetitive requests – replies. This type of standardized transaction contributes to avoiding a potentially unstructured narration on the part of the caller. Control operators provide a brief description in a tightly controlled communication conduct, in order to construct a mental picture (Weick and Roberts 1993). In the BFRSs, the majority of set procedures indicate the organizations' intention to minimize their dependence upon civilians as the initial source of information. However, despite the detailed mobilization procedures, control operators methodically engage in extracting as much information as possible from the public.

Yet as "crises cannot be separated from the viewpoint of the [ones] who [are] undergoing it" (Habermas 1975: 58), civilians fail to meet the ends of the fire and rescue services. F1-9 clearly illustrates these intentions: "I need"; perceptions, priorities, expectations and requests between civilians and control personnel are different. "What is the problem?" control personnel need to create a mental picture based on the visual contact the caller has with the incident. This picture facilitates the assessment of the incoming information so as to select the mobilization protocols and initiate the dispatching processes. "There has been a car accident". This phrase reveals an initial information that provides the operator with a blurred image. No further information is mentioned concerning the number of vehicles involved, individuals trapped, whether there is a fire in progress, etc. This initial information is insufficient for assessing the gravity of the situation and thus the scale of the mobilization. However, no further information is requested by the control operator, due to the fact that the caller was not equipped to answer questions concerning medical and safety issues. Additional information is received after contacting the police so as ascertain the exact location of the collision. Initiating the existing protocols on the basis of the information received is the next step to be taken by the CCC operators. Hence, incomplete information appears to be time consuming for both CCC personnel and operations' units.

Control operators instruct civilians that are in close proximity to a compromised location, to move away from an endangered area (B, 12-14; C, 10-12). It is part of standard operating procedures not to re-contact the caller on a land line near the incident-grounds, but on a mobile, if available, so as to avoid the caller turning round in order to answer the phone. Civilians learn to comply with such safety procedures introduced by the BFRSs. The relationship between the BFRSs and the civilians is systematically shaped prior to emergencies, on the level of prevention. These practices prove to be fruitful. For example, during a major incident managed by one of the SFRS, civilians would avoid contacting the CCC of the FRS unless necessary, as they were aware that the FRS was engage in managing the response to the incident: "Those days were the *quietest* days they had in the Fire Control. People wouldn't call unless it was an emergency. People knew that the Brigade was busy […] and they left us alone."[71]

[71] Senior fire-officer 2007, pers. comm., 15 March.

This phenomenon emerges as a result of the community service rendered by fire-fighters. The BFRSs have initiated a more interactive relationship between fire-fighting personnel and civilians. The "modernization of the fire and rescue services" (Bain et al. 2002)[72] entailed a shift of focus from intervention to prevention, so as to achieve community preparedness, "to drive down fatalities, injuries, loss of property and damage to the environment to negligible levels" (Bain et al. 2002: ii). Moreover this shift of focus was facilitated by the argument that fire-fighting personnel, if not engaged in emergency responses, had a lot of spare time that could be used in promoting community safety. Maximizing service provision, on the level of both intervention and prevention, instigates a dynamic interaction between fire-fighters, as service providers, and civilians, as service seekers, that leads to identifying each other's needs and priorities. Fire-fighters address questions along the lines of how to avoid a fire from spreading, how civilians should evacuate the compromised premises in case of emergency, what the behaviour of the fire and the smoke generated is, or what the risks present in their house or workplace are. This line of questioning presents fire-fighters with the opportunity of indicating to civilians what kind of information is necessary to the FRSs for a timely response to an emergency situation.

6.3. The analysis of incident logs

Incident logs are the transcripts of the recorded conversations between, on the one hand, control employees and operations' personnel and, on the other hand, BFRSs personnel and other emergency co-responders. Control personnel register the communication conduct with the operations' personnel and the emergency co-responders in order to provide a detailed archive with regard to the decisions and actions instigated by the FRSs.

The initial incident information provided by the caller is logged in as "general information" or "incident type" followed by "additional information". In both cases, a

[72] The Fire Services Act 2004 sanctioned the government's *modernization* agenda (Fitzgerald and Stirling 1999; Pyper 2003) that introduced structural changes to the BFRSs in order to further enable them to respond to Chemical Biological Radiological Nuclear (CBRN) deliberate and malicious acts of terrorism, industrial accidents, and natural disasters. Such changes included the establishing of reliable communication networks (Freedman 2005) among first-responder organizations and the regionalization of BFRSs control rooms, i.e. the merger of the 48 CCC operating in England and Wales into nine regional CCC with a compatible technical infrastructure.

short phrase refers to the type of the incident such as, in the "general information" case, "explosions in bedroom", "chemical resins", "possibly house on fire" or "Road Traffic Collision involving car and tractor, persons trapped, near at top of Southfield". On some reports, nothing is mentioned under "general information." However it appears to be unrelated to the significance of the emergency. In the "incident type" and "additional information" case, the former part is filled in by descriptions such as "fire in bedroom" and the latter, "person on balcony." In both cases, the transcription is not the exact description provided by the caller but an abstraction, as conceived by the operator. Interestingly enough, it is the operators' re-coding of the conversation with civilians that is logged in as "transcription" and not the actual conversation, unlike what happens with the operations' personnel. Apart from the brief description of the incident provided under the labels "gen[neral]. info[rmation]" or "incident type" and "additional info[rmation]", there is also a "summary", provided in the first case only, which is not formed according to the initial information, as expected by its place in the report, but as a result of the reports provided by the operations' personnel during or after the emergency response. The analytic categories included in the formal reports indicate that it is the professional's view that is taken into consideration rather than the layperson's – the civilian's – perception.

Communication with the public assumes a different value than communication conduct with the operations' personnel, other first responders and specialists. Initial information appears to be very general or inaccurate and, therefore, the importance of logging it secondary. The only case where the conversation was transcribed or, rather, described was when a civilian's inability to communicate the incident information caused delays in the process of mobilization: "caller did not pass address to operator called … number to get address and ascertain what was involved." On another occasion: "caller stated the police and ambulance had just arrived on scene. Caller did not know exactly where he was so fire control contacted police control for exact location before mobilizing." Operators may use the registered information as a *safety valve* to avoid responsibility in case of a mobilization and operational misconduct.

6.4. How control employees interact with operations' personnel

In the Hellenic case, I presented the interactions between control operators – dispatchers, operators/dispatchers – officers, and officers – control administration/ command structure. The UK FRSs have a different *modus operandi*. Control personnel undertake three tasks: first, they establish communication with the operations' units usually through codes. Control operators then instigate communication with other emergency co-participants and on-call officers. In order to present the parameters of the communicative interactions amongst the aforementioned actors, I use transcripts from the SFRS1 and compare them with what I observed during my fieldwork, from the interviews and the casual conversations I had with BFRSs organization-members.

6.4.1. Communication with operations' units

When control personnel begin to communicate with the operations' units on the incident-grounds, they use a set of codes or the *non free-spech* policy. *Non free-spech* may be a term introduced by the SFRS1 but it is a practice commonly used among the BFRSs personnel to describe the linguistic patterns used to communicate information between the control personnel and the operations' units. Such practice contributes to avoiding distortion in communication. Such distortion occurs when the messages exchanged within the organization contain non-informational outputs which may lead to a problematic organizational conduct (McQuail and Windahl 1981; Jacobson in Manning 1992; Glaister 2006). Whilst responding to an emergency, control personnel require a constant, continuous, precise and time-saving incident information transaction. In all the BFRSs this transaction is materialized through the use of six types of messages: *holding, assistance, informative, stop,* and *detaining service*. The *holding* message signifies that operations' units are unable to provide an accurate image of the emergency as soon as they arrive on the incident-grounds. So, they acknowledge their arrival on-scene and request more time before reporting back to the control. The usual format of the message is (table 6):

Table 6: The format of the messages exchanged during emergency responses

FROM
AT
REASON FOR HOLDING
ACTION BEING TAKEN

The *assistance* message has priority over all other transmissions. It indicates that operations' units necessitate reinforcements on the incident-grounds. *Assistance* messages acquire the following format (table 7):

Table 7: The format of the assistant message

PRIORITY	ASS MESS FROM ADO DOE CAN YOU REQUEST ATTENDANCE OF AMBULANCE FOR 2 FIRE SERVICE PERSONNEL AND INCREASE PUMPS TO 4 TO INCREASE NUMBER OF FIRE SERVICE PERSONNEL.
FROM	
AT	
HELP REQUIRED	
REASON	

(Source: SFRS1, case: explosions in bedroom)

Through *informative* messages operations' units communicate any information with regard to the emergency response to control personnel (table 8).

Table 8: A transcription of an informative message

INF MESS FROM ADO DOE THIS IS A 2 STOREY DWELLING HOUSE APPROX 10M X 10M FIRE IN UPPER FLOOR AND ROOF AREA 2 HRJ AND 2 MAIN BRANCHES IN USE FIGHTING FIRE FROM OUTSIDE ALL PERSONS ACCOUNTED FOR FFS FERRYING WATER FROM SURROUNDING AREA.

(Source: SFRS1, case: explosions in bedroom)

Control personnel require *informative* messages to be transmitted at intervals of about 20 minutes in order to maintain communication with the incident-grounds even in cases where emergency responses are smoothly conducted. The *stop* messages indicate that no more assistance is required and the emergency is effectively managed. The *detaining* message transmitted after the *stop* message indicates that a number of resources are required to remain on the incident-grounds due to the nature of the incident. The most frequent

messages exchanged during an emergency response are the *assistance* and *informative* messages. A different grammatical structure between the *informative* and the *assistance* messages indicate their varying function in the communication process.

Table 9: Example of informative messages

INF MESS FROM ADO DOE THIS IS A FARM BUILDING APPROX 30M X 20M MIDDLE SECTION MEASURING 12M X 20M IS WELL ALIGHT FFS ENGAGED IN FINDING WATER SUPPLIES FOR FIGHTING FIRE TM DEFENSIVE A11 IS COMMAND PUMP.

(Source: SFRS1, case: hayshed)

In *informative* messages, the type of message is explicitly mentioned before its context is revealed: "informative message". Then, the source of information is stated followed by the verb 'to be' in the present tense and the indicative mood, in order to describe the present state of the fire-fighting units on-site and their future deployment. In turn, the actions taken and the results of these actions follow the conjugation of the verb 'to be'. The speech pattern developed for these messages allows the use of participles and infinitives. However, there are hardly any pronouns employed as objects, and subjects. The use of present tense, the absence of pronouns, and the simplified syntax, achieve a seemingly objectified description of the actions taken on the incident-grounds. When information messages are communicated to the control not by the delegate fire-fighter but by the IC, the messages are no longer labelled as INF MESS (table 10).

Table 10: Example of informative messages

MESSAGE FROM AM DOE TO SAY THAT HE HAS SPOKEN TO SM BROWN ST THE INCIDENT AND BETWEEN THEM THE ABOVE RELIEF ARRANGEMENTS HAVE BEEN CONFIRMED

(Source: SFRS1, January 2007)

Conversations between control personnel and officers become a *free-speech* transaction of information with a specific linguistic structure: subject – verb – object/ predicate with dependent and independent clauses, welcoming the use of pronouns. This syntax allows the focus on individual actors – the officers/managers – rather than the actions themselves, as

appeared to be the case when information messages were transmitted by delegate fire-fighters. Verbs such as "to contact" and "to confirm" are used to indicate that officers verify the information exchanged ascribing a slightly different – higher – status to the officers on-scene. Unlike control employees' practices with the BFRSs personnel on-scene, CCC does not transcribe verbatim the communication conduct with other organizations involved in the emergency responses. They merely mention the context of the information exchanged that may affect the actions taken on the incident-grounds by the FRS:

Table 11: Example of the information exchange between the BFRSs and the other responder-organizations

SEPA INFOMED SEPA CONTACTED AND ALL DETAILS PASSED ON TO JOHN

(Source: SFRS1, January 2007)

The linguistic structure of *assistance* messages is quite different:

Table 12: Example of assistant messages

ASS MESS FROM ADO DOE MAKE PUMPS 04

(Source: SFRS1, January 2007)

The communicators use the imperative mood rather than indicative and the verb employed is 'to make' rather than 'to be'. Such syntax forms a brief standardized order, forwarded to control employees by operations' personnel. This standardization intends to instigate a prompt response and to allow an order to be processed without insulting the control personnel who processes the request. Thus, the standardization balances the distribution of power between the communicators. Such practice accords with the transition from a quasi-militaristic Brigade to a role-oriented[73] service (*Fire Services Act* 2004)[74] and reflects the change in the communication conduct of the BFRS personnel: there are no longer orders

[73] Fieldnotes, April 2007: 'Management Structure', Jan 07.doc

[74] http://www.opsi.gov.uk/ACTS/acts2004/en/ukpgaen_20040021_en_1, accessed: 08/12/2006; http://www.opsi.gov.uk/legislation/scotland/acts2005/en/aspen_20050005_en_1, accessed: 08/12/2006; 'The Future of Fire Service Control Rooms in Scotland,' Mott MacDonald: Brighton http://www.scotland.gov.uk/consultations/justice/ffscr.pdf, accessed: 31/01/2004.

but procedures, a decision-making process, occurring during emergency response and promoting participation (Lewis et al. 2006).

The BFRSs SOP do not endorse the use of abbreviations (e.g. ass mess, ffs) and acronyms (e.g. ADO, HRJ) in the communicative interactions during emergency responses, unless they are widely recognized by the personnel involved in the response. Abbreviations and acronyms are used more lavishly by the large-sized brigades as a time-saving effective practice, especially during the communications conducted via telephone rather than via radio.[75] The application of codes on the other hand, that is, a combination of numbers used to indicate the type of emergency encountered, the status of the appliances, the location of the appliances and the status of the response for the fire control to recognize the source of information, the type of incident, the degree of risk involved, the necessity of assistance and so on is widely used by the FRSs (table 13).

Table 13: Example of how messages are codified

Emergency special service, aircraft, aircraft landed safely, is transmitted as: *Code 14, type 0, aircraft*

(Source: EFRS2, DP#5127 v6 Jan2007)

These codes, however, vary from one BFRS to another. If it is necessary for the control rooms to interface during an emergency response, they cannot use their codes as they do not operate under national standards. Operations' personnel maintained that it is difficult for them to remember all the codes, abbreviations and acronyms, apart from those that they use on a daily basis. Control personnel nonetheless argued that operations' personnel "don't even know what the HAZ(ardous) MAT(erial) officer stands for."[76] Generally, the smaller the BFRS the more strict the implementation of procedures and the more rigid the linguistic patterns followed during emergency responses. Control personnel exercise control over their conduct with a smaller number of responders. If the span-of-control remains narrow, the control becomes manageable.

[75] Fieldnotes, April 2007: 'Standard Abbreviations used by ECFRS Control', #19956 CON036 (October 2006).
[76] Control operator, pers. comm., 17 April 2007.

6.4.2 Communication with on-call officers

BFRSs control operators undertake the task of communicating incident information to all organization-members involved in the response regardless of their rank. The following examples were selected and transcribed in order to depict the dialogic practices between control personnel and on-call officers. In the BFRSs, on-call supervising officers are senior fire-officers, who have formerly worked in the fire stations but are employed in the administration after reaching a certain rank. Depending on the intensity of the emergency, control personnel inform on-call officers who proceed to the incident-grounds and decide whether to assume control of the response as ICs. The more acute the emergency, the more likely it is for the higher-ranking officers to assume the coordination of the emergency response.

Case A: rescuing a trapped animal

1	**COP**	***Well, just let you know that we are going out to a cow trapped in mud at road X; you know*** **[she is providing details so as to create a mental picture about the area where the rescue operations will be deployed, but these details and the names provide are illegible].**
2	**FO**	***Aye.***
3	**COP**	***Right behind it is a cow trapped in mud.***
4	**FO**	**[Asks about the appliances, judging from the answer but rather incomprehensible].** ***CO: Right, no problem*** **[the use of 'no problem' is a rushed reply to a potential "cheers" from the FO; it appears that she wants to end the conversation as there is no more information to forward].**
5	**COP**	***We are just sending one pump and the*** **[another type of appliance].**
6	**FO**	***Ok.***
7	**COP**	***Ok?***
8	**FO**	***Is this 1st message?***
9	**COP**	***Right, no problem*** **[the use of 'no problem' is a rushed reply to a potential "cheers" from the FO; it appears that she wants to end the conversation as there is no more information to forward].**
10	**FO**	***Cheers.***
11	**COP**	***Ta.***

(Source: SFRS1, December 2006)

Case B: fire in a cottage

1	**FO**	***Hello.***
2	**COP**	***Hello.***
3	**FO**	***Explosions in bedroom*** **[note: the fire-officer was apparently listening to**

		the radio transmissions and heard about the mobilization].
4	**COP**	***Yes,* [she states the location; she provides the exact address; finally she names the area] [incomprehensible] *make pumps three and requested the aerial platform.***
5	**FO**	***Hm… hm…***
6	**COP**	***And they're… there now.***
7	**FO**	***Right … any messages?***
8	**COP**	***The only message I have got was* [incomprehensible] *that it is a two stories dwelling house* [incomprehensible] *two* [incomprehensible] *fire-fighters with BA* [breathing apparatus]. *Building well alight* [incomprehensible-speaks fast and rather unclear] *make pumps three* [note: she apparently reads the informative message the operations' units transmitted to the Control over the radio as soon as they were on-site].**
9	**FO**	**[Appears to ask whether the tenants are out; the details of the question are rather unclear].**
10	**COP**	***At the time of the call,* [they were] *all out of it.***

(Source: SFRS1, April 2003)

Case B, 2nd example

11	**FO**	***Hello.***
12	**COP**	***Hello it's X. We have a house on fire.***
13	**FO**	***Whereabouts?***
14	**COP**	***In Y* [location spelled slowly], *Z Street, A* [name of the area].**
15	**FO**	***Aha, aha…***
16	**COP**	***There's been reported there was an explosion in the bed room […] the occupants are out.***
17	**FO**	***Ha, ha* [he probably adds that he will go there].**
18	**COP**	***Ok then.***
19	**FO**	**[He repeats address and location verbatim].**
20	**COP**	**[She repeats verbatim].**
21	**FO**	**[He repeats verbatim]. *I'll make it across; maybe get directions on the way across.***
22	**COP**	***Ok-do-key.***
23	**FO**	***Thanks. Bye now.***

(Source: SFRS1, April 2003)

Case C: fire in a dwelling.

1	**FO**	***Hi; its X.***
2	**CO**	***Oh, right. Just let you know that we are mobilizing two pumps from X and one from Z* [X and Z being the area where the fire stations are located] *to report at a house fire at Y farm at A* [location].**
3	**FO**	***You are joking* [the officer was attending another incident nearby almost all night before this emergency erupted early in the morning].**
4	**CO**	***No.***
5	**FO**	***Eh, eh, eh… Y* [farm], *eh?***
6	**CO**	***Aye.***

7	**FO**	***Ok.***
8	**CO**	***Ok?***
9	**FO**	**[he asks something, incomprehensible]**
10	**CO**	***Ok then.***
11	**FO**	***Ok; ta.***
12	**CO**	***Ta.***
13	**FO**	***Ta.***

(Source: SFRS1, December 2006)

Case C: follow up call; 2nd example

14	**FO**	***V tell I will take that call because Y*** **[the name of the other on-call officer]** ***is still on*** **[incomprehensible, but it appears he is saying that the other officer is engaged in another incident]*; what is it?***
15	**CO**	***It's*** **[name of the store, name of location, address, directions by providing landmarks]*; ok?***
16	**FO**	***Ok; what you are mobilizing?***
17	**CO**	***CO:*** **[she provides the numbers of appliances]**
18	**FO**	***Ok; thanks very much.***
19	**CO**	***That's fine.***

(Source: SFRS1, December 2006)

Case D: fire in a garage

1	**FO**	***Hello.***
2	**CO**	***Hey Tommy; I am telling you because you are closest. I know you are not*** **[she refers to knowing that the emergency was out of his area of jurisdiction]** ***I can tell the other officer, just let me know. We are going to a chemical fire at*** **[name/location].**
3	**FO**	**[He repeats verbatim].**
4	**CO**	**[He repeats verbatim].**
5	**FO**	**[He repeats verbatim].**
6	**CO**	***Yes.***
7	**FO**	***He is over there*** **[incomprehensible]**
8	**CO**	***Right. I find him on his phone then;***
9	**FO**	***Ok?***
10	**CO**	***Ok, no problem.***
11	**FO**	***Ta.***
12	**CO**	***Ta.***

(Source: SFRS1, April 2006)

Case D: follow up call; 2nd example

13	**FO**	**[He answers the call by stating his name]**
14	**CO**	***Hello*** **[cheerfully]*; just to*** **[incomprehensible]** ***that we have a chemical fire in shop in Y location; we have got*** **[mentions the appliances dispatched on**

		the incident-grounds].
15	**FO**	**[He asks for further information and she replies]**
16	**CO**	***We don't have the details*** **[the rest of the discussion is incomprehensible].**
17	**FO**	***There are two pumps, one contamination unit and two officers,*** **[location]** ***you say?***
18	**CO**	***Yes, X.***
19	**FO**	***Alright.***
20	**CO**	***Thank you.***
21	**FO**	***Thank you.***

(Source: SFRS1, April 2006)

Case G: fire in hayshed stored in an agricultural building.

1	**FO**	***Hello.***
2	**CO**	***It's Control.***
3	**FO**	***Hiya.***
4	**CO**	***Just wanna let you know that we are mobilizing three pumps to [incomprehensible] hay shed sack fire*** **[she speaks extremely fast] at the farm at [she provides the location].**
5	**FO**	***FO: Hold on to get my…*** **[Incomprehensible]** ***a wee pen.***
6	**CO**	***Aye*** **[she spells the word in dictation speed].**
7	**FO**	**[He repeats what she has said].**
8	**CO**	**[She repeats the name altogether and the location].**
9	**FO**	**[He repeats the location].** ***What is it on? Is it on the main road?***
10	**CO**	**[She replies providing directions, creating a mental picture: "… off the main road, half a mile…"].**

(Source: SFRS1, December 2006)

These conversations are the initial interactions between control operators and on-call officers. Control personnel provide on-call officers with the initial incident information. The length of the aforementioned conversations is almost the same, ten (in most cases) to thirteen lines. The follow-up calls may be briefer due to the fact that on-call officers have been informed with regard to the emergency but request additional information (case C). The almost equal length of the above conversations indicates that the succession of requests and replies between control personnel and on-call officers is rather standardized despite that fact that "control uses free-speech with everybody else but the crews."[77] *Free-speech* denotes that patterns are not intentionally introduced in the communicative interactions between control personnel and on-call officers. Nonetheless, the recorded conversations reveal that patterns do develop. The transmission of incident information is standardized. Control operators communicate the type of incident (e.g. C2; D2; G4); they,

[77] Control employee, pers. comm., 1 December 2006.

then detail the location where the incident is reported (C2; D2; G4). After reporting the initial incident information, the process of confirmation begins. On-call officers initiate a series of request-replies whereby they intend to make sure that they have completely understood the information the control operators communicated (C5-11; D3-6; G7-10). Then the operators may or may not provide information with regard to the mobilization process depending on the intensity of the incident and the interest of the on-call officers. Usually, such information is provided when the on-call officers decide to attend and take charge of the emergency response (C14-19).

Casual greetings – "hiya", "hi", "hello" – and identification of the communicators are usually the opening lines of the communication conduct between control personnel and on-call officers. In small-sized services, such as the SFRS1, the identification of the control employees who initiate the communication process is unnecessary. The communicators usually identify one another by their voices (e.g. cases A and B; C14). In all BFRSs, the telephone number of the command and control centre shows on the on-call officer's mobile or pager, and, thus, the process of identification begins before the verbal communication is instigated. In smaller-sized services, when control employees identify themselves, they use either their first name (B12) or the term "control" (G2). In the larger-sized services, control personnel usually use both the term "control" and their names and ranks. The term "control" is a metonym. It is a single word used to describe a group of individuals performing similar tasks. The BFRSs appear to identify individual actors according the role they assume as organization-members. "Control" is not the dispatcher who initiates a communication or instigates the mobilization of the appliances. It is the department that undertakes the task of launching the emergency response. Metonym indicates that the effectiveness of the communication relies on the performance of the bulk of the organization-members – the *play* (Goffman 1991) – rather than the individual *roles* each actor undertakes. On the other hand, when the communication conduct is instigated by the on-call officers, they are obliged to identify themselves (C1).

Cases A, C, D, and G indicate that the control operator initiated the communication conduct. The first example of case B indicates that the control officer was listening to the radio transmission and he contacted the control asking for the available information, which occasionally occurs, although control employees make an effort to maintain a practice whereby they are the ones to initiate the interaction when they decide according to SOP

that the on-call officers need to be notified or their assistance is sought by the operations' officers on the incident-grounds. Yet, some on-call officers "can't keep their nose out […] or contact the officers at the incident."[78] In other words, some of the fire-officers disregard SOP and engage in communicative interactions with the operations' personnel, while neglecting to log-in, through the control room, information exchanged during their communication conduct. Information necessary to the assessment of the emergency situation, to the decision-making and to the information dissemination process, for which the CCC is responsible, is not registered: "there is not much need to contact each other but to contact us."[79] Moreover, "some" of the fire-officers contact the control room more frequently than what *control* regards as necessary. According to control personnel and the recorded conversations analyzed, all on-call fire-officers are notified as soon as the operations status changes on the incident-grounds and the change is communicated to the control employees through the informative messages sent by a fire-fighter, usually appointed by the IC.

Also, case B indicates that as soon as the on-call officer heard a message on the radio reading "explosions in bedroom" he repeated the exact information he heard to the control operator (B, 3) without using the interrogative form and he expected the operator to acknowledge and elaborate on that piece of information. The officer's instrumental approach triggered her instrumental response: she repeated verbatim the information registered electronically.

"Verbatim" is a term that indicates that information exchange practices are standardized even when and where *free-speech* applies. Control personnel literally recite the information that is logged into their computer systems, off their monitors. On occasions, they forward the information at dictation speed (G6), a practice commonly applied during the formal communication conduct between operations crews and control personnel. The verbatim repetition of a message is a beneficial practice. Control operators avoid restructuring the message anew. The incident information is registered in the system according to categories such as location of the emerging incident, type and specifics of the emergency. When the control operator contacts the on-call officer, he/she recites the information filled in each category. On-call officers have learned from experience how to create a mental picture of

[78] Control employees, pers. comm., 23 and 27 March 2007.
[79] Control supervisor, pers. comm., 1 December 2006.

an emergency based on these categories. Therefore, this practice facilitates the understanding of the message and reduces the likelihood of misinterpreting some or the whole of the content of the message. For example, table 14 is part of the transcript of the incident report as registered in the computer system of the SFRS1:

Table 24: Transcript of an emergency report

Location	REDFIELD, GORDON ROAD, SOUTHERNSVILLE, POST CODE
Type of emergency	EXPLOSIONS IN DWELLING
Specifics of emergency	2 STOREY DWELLING HOUSE APPROX 10M X 10M. 2 FFS IN BA. BUILDING APPEARS TO BE WELL ALIGHT. MAKE PUMPS 3.
FFS: fire-fighters BA: breathing apparatus	

Lines B4 and B8 indicate that the aforementioned information was forwarded as such – location, type, specifics – by the control operator to the on-call officer. Furthermore, control employees make an effort to be precise with regard to diffusing the facts. Information such as the type and the location of the incident is transmitted with accuracy: "At the time of the call […]" (B, 10). Due to the dynamic nature of the crisis, the circumstances under which the emergency response takes place may suddenly change and, thus, the initial incident information may be altered. For example, the fire in a two-storey dwelling erupted at 21:31(case B). At 21:46 the intensity of the fire forced the IC to request a third appliance on the firegrounds. At 22:36, the IC requested a fourth fire-engine and an ambulance as two of the fire-fighters were injured during the response. Therefore, control personnel make an effort to accurately disseminate the incident information at hand. Moreover, control personnel intend to be brief. Case A indicated that the control employee intended to end the conversation as soon as she transmitted all the available information (A, 4; 7; 9). So, in the BFRSs, precision and brevity are two parameters in the information exchange process that are satisfied by the verbatim repetition of the content of the message. The verbatim exchange does not signify that the receivers have not understood the message but that they have understood it correctly, unlike what usually happens in the HFC. The epilogues of the conversations between control operators and on-call officers also sustain that the *free-speech* practices bear patterns of standardize communication (table 15).

Table 15: Endings of communicative interactions between control operators and ops' personnel using free-speech and non-free-speech policies

Informal: telephone	**Patterned succession**	**Formal: Radio transmission**	**Important definition[80]**
Free-speech		*Non free-spech*	
Ok.	Initial acknowledgement	Over	"An answer is expected or required"
Ok?	(re)Verification	Over	"An answer is [STILL] expected or required"
Ok.	Final (re)acknowledgement	Out	"Control radio operator completes transmission"

Observation has also indicated that BFRSs employ modes of introducing a piece of information without alarming the receivers in the communication conduct: "Hello Z (fire station); it is (name and post of the Control employee). It is not an emergency […]" and then she continues on transmitting the information to the receiver. The phrase "it is not an emergency" shows that when communication occurs between the CCC and a fire station the preliminary assumption is that a response to a crisis will be requested. Furthermore it indicates the CCC employees' knowledge of this assumption as a predetermined mode of communicating information concerning a crisis. Finally, an organizational style of avoiding confusion by stating the reason of the contact is introduced. This display of instrumentality, as far as communications are concerned, becomes obvious in the routine conduct of the organization between the CCC and the fire stations.

In the BFRSs forms of politeness are integrated into daily communication conduct. "Being polite" equals "being professional". The fact that people address each other by their first names does not imply that they are being impolite (e.g. B12; C1; C14; D2). Even higher-ranking officers insist on being called by their first names so as to establish a climate of familiarity. This climate appears necessary in order to re-establish the balance between the higher- and the lower-ranking personnel after the introduction of role- rather than the rank-system. The only exceptions observed concerned older individuals, usually senior officers, with a military background, who would offer to be addressed by their first name but appear to enjoy being addressed as "boss" or "sir" rather than their surnames. During my fieldtrip in the SFRS1 and EFRS2, at least two higher-ranking officers made it explicit that being

[80] Source: EFRS2 communications manual, DP#5127 v6(Jan 07): 3.

addressed as "boss" or "sir" rather than their first name created "the right distance"[81] between the person whose role is to "give orders" and the person whose role is to execute these orders.

Usually, procedures are followed in order to fulfil the expectations of each of the actor's roles on- and off-scene. Under certain circumstances standard operating procedures may be breached (D2). When such practices take place, the on-call officer is briefed with regard to the reasons. For example, in case D, the proximity of the on-call officer to the firegrounds would eventually allow a timely response instigated this diversion from SOP. Although the officer was assigned to another district, he accepted the call and proceeded to the firegrounds. Other cases (e.g. B) indicate that on-call officers consent to assisting one another when multiple crises emerge in one district and they are assigned in different areas (C14).

6.5. Random conversations

BFRS control personnel diligently see that incident information is diffused to those actors directly involved in the response. Occasionally they receive phone calls from off-duty personnel who seek information with regard to an emergency. Often, it is the fire-officers who pry in situations that are "none of their business."[82] The following example shows the disposition of control personnel towards individuals who disrupt the emergency communication process:

1	**COP**	**[she states the name of the fire and rescue service]**
2	**FO**	**[he states rank, name and post]**
3	**COP**	***Hah, hah…***
4	**FO**	***You had a call*** **[he mentions type of incident location],** ***have you?***
5	**COP**	***We have; yes; hah, hah.***
6	**FO**	***You…***
7	**COP**	***Hah, hah…***
8	**FO**	***It's X*** **[location]*?***
9	**COP**	***It is X, yes.***
10	**FO**	***It'd be more than one pumper?***

[81] Fire-officers, pers. comm., 30 December 2006; 11 April 2007.
[82] Control employee, pers. comm., 1 December 2006.

11	**COP**	***Yes, it's a two pump.***
12	**FO**	**[asks after who went]**
13	**COP**	**[answers who was sent]**
14	**FO**	**[he states the reason why he called: "struggling for a crew"; the rest is incomprehensible]**
15	**COP**	**[she answers who are on their way]**
16	**FO**	**[Goes on about the mobilization and describes what goes on at that moment; she becomes more talkative when he states his business calling].**
17	**COP**	***Ok?***
18	**FO**	***It's well alight?!***
19	**COP**	***Yea; ok?***
20	**FO**	***Ta.***
21	**COP**	***Ta.***

(Source: SFRS1)

Random conversations are considered as noise in the emergency communication process: "yes; hah, hah […] Yea; ok?" BFRSs control personnel appear reluctant to communicate information to fire-fighting personnel who is not involved in the emergency response (lines 5; 9; 11). The control employee is laconic. Without being impolite, she avoids replying the communicator's requests.

6.6. How BFRSs control personnel interact with other co-responders: The emergency command structure

Inter-organizational communication patterns are reproduced during emergency responses. Communicative interactions between co-responder organizations during an emergency response should be structured *a priori* rather than be the concurrent outcome of the synergistic interactions on-site (Perrow 1999: 98; Manning 1992; Hardy and Phillips 1998). If the organization aims at the development of a common platform for communication and at ensuring the effective cooperation of different organizations that will consequently achieve their interoperability (Comfort 1994), an understanding of the routines and practices of first-responder organizations is necessary.

In the British cases, the association of the first-responders is instigated on an administrated level. On the incident-grounds, inter-operability is achieved on a strategic, tactical and operational level. When responding to major incidents, three stages of decision-making are

put into motion. First, the top tier of the emergency management command structure is the Gold command in which delegated representatives from the responder-organizations set the strategic aims of the response. Second, the Silver command which, in drawing upon the strategic aims already established in the previous stage, manages the organizations' tactics, i.e., the ways in which the organization deploys its resources and, therefore, the course of action on incident-grounds. Finally, the Bronze command directly supervises operations on-site.

On the administrative level, familiarisation with the participant actors is attained prior to emergencies, even from the phase of planning and executing joint exercises. Exercises are the avenue towards identifying the needs of the participant actors. BFRSs administrative personnel maintain that all FRSs personnel are well acquainted with the SOP. In contrast, operations' personnel argue that there is very little time to rehearse protocols and procedures.[83] These contradictory statements underline the fact that obstacles emerge on an intra-organizational level even before organization-members realize that their interactions affect inter-organizational cooperation (Turner 1976).

In the BFRSs, the planning, on an administrative level, and the implementation of these joint exercise plans, on an operational level, involve predominantly higher-ranking personnel. Generally, joint exercises improve communication conduct between organization-members on a strategic or tactical level (Gold and Silver command, respectively) without necessarily extending this improvement on an operational level (Bronze command). This type of interoperability encourages affiliation among the same individuals. Yet this constant recycling of the same participant actors does not establish the know-how of inter-organizational communication amongst the majority of organization-members. Gold and Silver Command affiliate with emergency co-responders while operations' personnel do not become aware of the communication conduct occurring. Hence, managing operational units becomes an intra-organizational issue directly influenced by intra- and extra-organizational parameters.

[83] Fire-fighting personnel, pers. comm., in Fieldnotes: November 2006-July 2008.

6.6.1. The BFRSs and the police

I have identified the significance of the information sharing as a key factor in effective communication and, thus, cooperation (Vaughan 1996; Tamuz and Lewis 2008). In the following paragraphs, I address the patterns and the techniques the BFRSs develop when they communicate with other first-responder organizations on the incident-grounds.

The police assume a significant role on-site. Generally, they facilitate the fire and rescue operations by establishing a perimeter (the outer cordon) within which fire-fighters and rescuers are deployed (the inner cordon) and may operate undisturbed. They manage the traffic near the incident-grounds and any disturbances caused by the public, such as civilians' self-involvement in the incident. Finally, they set the crime scene in order to conduct their investigation, as soon as fire or rescue operations are over. As far as the context of information is concerned, police and fire investigators may work alongside each other, yet independently, in order to identify whether, and, if so, how a crime has been committed. On the level of the CCC of the BFRSs and the British police, the latter due to the multiplicity of incidents they encounter, and in contrast to, for example, the ambulance service, employ a bureaucratic style of listing, prioritizing and enumerating the incoming incidents. With the aim of maximizing efficiency, they provide the CCC of the BFRSs with a reference number which the CCC uses every time they contact the police, in order to seek or provide information regarding the incident.

The communication conduct between the EFRSs, the SFRSs and the police varies. Interactions between the SFRSs and the police during emergency responses have two constituent dimensions: they are constant and consistent. The FRS control personnel begin interacting with police control personnel when the former receive information concerning an emerging incident. As soon as the SFRSs control personnel dispatch the necessary appliances on-site, they forward the incident information to the police along with the mobilization information. Occasionally, control personnel notify the police with regard to an emergency before they inform the on-call officer and after they have mobilized the necessary resources on the incident-grounds. The SFRSs control employees also contact the police with regard to the progress of the operations and the status of the fire-engines.

The SFRSs control personnel argue that their commitment to systematically disseminating any information concerning the emergency, as well as their organizations' course of action on-site, should be attributed to their intention to emphasize their contribution to the response and, at the same time, abnegate any responsibility with regard to misconduct occurring on-site by other co-participant organizations.[84] The EFRSs communicative interactions with the police are frequent without being as systematic as the SFRSs. Information disseminated concerns the mobilization of the organizations' resources and the progress of the emergency response.

The one-way systematic dissemination of information, directed from the BFRSs to the police reveals the degree of the fire and rescue services' dependence on the police. In this 'hierarchical transactional structure' (Boisot 1995: 247), the police become a well-thought-out bureaucratic control mechanism, the constituent organization in the incident command structure. A constant and consistent, well-codified dissemination of information indicates that the police are the last recipient that acts as the higher authority among emergency co-responders. Stability in this command structure is achieved through the centralized one-way dissemination of information (Boisot 1995; Schneider and Barsoux 2003). When researching British organizations, Hofstede maintained that organizations are decentralized and organization- members are generalists, entrepreneurial, flexible. They delegate authority and coordinate their actions through informal personal communication (Hofstede 1994 and 2005; Schneider and Barsoux 2003). However, Hofstede's 'village market, Anglo-Nordic model' does not apply for inter-organizational communication in all the British cases examined. Whereas the decision-making process is flexible and delegation occurs according to each of the emergency co-participant organizations' obligations, coordination through informal personal communication does not generally apply. In contrast, where familiarity is accomplished between BFRSs and police organization-members, it facilitates their formal interactions rather than substituting for them. Moreover, the fire-fighting organizations examined do not act as free agents; rather they report to a coordinating authority.

Attaining familiarity serves as a significant parameter in affecting the outcome of an emergency response. The success of the emergency response operations launched after the

[84] Fieldnotes, March – May 2007.

explosion and collapse that occurred at the premises of the Stockline Plastics Factory in Glasgow on the 11th of May 2004, was attributed, amid other reasons, to familiarity developed during joint exercises among first responder organizations: "The beauty of this particular incident [was that] the major ICs from the three services [i.e. police, fire and rescue as well as ambulance services] knew each other. They have worked together […] before. […] When I was in the Police Headquarters […] because of my past experience working in that environment […] I knew almost everyone I was dealing with. […] and […] that is the essence of why I worked so well."[85]

When the issue of familiarity emerged during conversations with the BFRSs personnel, it was unanimously argued that familiarity was an avenue towards "know[ing] yourself", "getting more information", and "ask[ing] people in a much easier way how [something] works."[86] This self-awareness – knowing one's levels of stress and fatigue – appeared to derive from "team awareness" – anticipating and addressing the needs of other responders (McLennan 2006: 32) when FRSs personnel observed how other participant organizations were operating on the incident-grounds. Some BFRSs employees perceived this comparison as an effective tool of empirical performance measurement, whereas others expressed an implicit antagonism between the emergency-responder organizations: "the police think they run the incident; the fire service knows they run the incident; and they let the ambulance think they run the incident."[87] The language of both the police interviewees confirmed the senior fire-officer's statement: "[…] what [it is] that the fire service would do for us."[88] Therefore, self-awareness, as defined by various organization-members, cannot provide an accurate measurement for performance.

Furthermore, formality is not bypassed by familiarity. On the contrary, formal procedures may facilitate or be facilitated by familiarisation. Familiarisation of the participant actors in an emergency response does not necessarily facilitate the information exchange process unless there are SOP to lay out the process. A contradiction emerged whilst conversing with BFRSs employees: while it was being argued that information exchange is facilitated through familiarisation, it was also maintained that, generally, police reveal information on a need-to-know basis. The BFRSs personnel claimed that plans laid out or efforts made to

[85] Fire-officer, pers. comm., 15 March 2006.
[86] Fire personnel, pers. comm., April – May 2007.
[87] Senior fire-officer, pers. comm., March 2007.
[88] Police officers A and B, pers. comm., June 2007.

join the CCC of the police and the FRSs, were obstructed by the police's unwillingness to reveal information that would not directly involve the fire service.

Although the BFRS personnel mostly argue that technical problems, such as the incompatibility of telecommunication systems, hinder inter-organizational communication, organizational routines also hamper communicative interactions. For example, the CCC of the BFRSs do not engage in communicative interactions with one another and, therefore, are unaware of each other's routines. They do not know how other FRSs codify emergencies, although they are sharing similar software technology.

6.6.2. The BFRS and the ambulance service

As is the case with different organization structures, the ambulance service operates under different protocols than those of the BFRSs. Generally, before proceeding on-site, the CCC of the ambulance services provides the caller with a series of questions, in order to complete a wrap-sheet. If the ambulance operator is not provided with the necessary information, including an exact address, the ambulance services do not proceed on-site. Moreover, the difference in the perceptions of the organizations is delineated through the language they use to describe an incident (Whorf 1956). For example, a "trapped person" for both the police and the fire service is an individual in need of assistance to move away from a compromised area. For the ambulance services, however, a person is perceived as "trapped" when physically unable to move because, for example, he/she is covered with debris. Therefore, first-responder organizations assess and act differently before – based on the initial incoming information – and after – based on their own observations – arriving on the incident-grounds. Thus, "it's always a bit of rivalry when working with them [the ambulance service]."[89]

In the EFRS2, a CCC employee was accused by an ambulance operator of not providing adequate information to enable the mobilization of the necessary ambulance units. Despite the CCC employee's efforts, she was unable to reach any of the officers on-site in order to

[89] Control supervisor, pers. comm., 14 April 2007.

attain and then forward the information requested by the ambulance operator. She was "terrified" when he filed a complaint, accusing her of being rude and uncooperative. After a careful examination of the recorded conversations, she was found not to have acted in an unprofessional manner. The recordings functioned as a safety valve in a blame-game instigated between organization-members. The information dissemination process was hampered by the circumstances surrounding the incident. Operations' personnel were unable to take the CCC employees calls or provide her with the information she requested. The ambulance operator could not mobilize any of the organization's resources unless he was given the requested information. Between the demand for assistance and the inability to offer the requested support, an inter-organizational conflict arose. The difference in the organizations' *modus operandi* and the unwillingness to identify the problem, assess the situation and possibly circumvent SOP resulted in miscommunication.

Thus, BFRSs' operations' personnel generally make an effort to provide *ad hoc* solutions to any problems they encounter on the incident-grounds. The administrative personnel, on the other hand, assert that resolving problematic issues ad hoc may be effective in the short-term, but ineffective in the long-run. When problems on incident-grounds are not reported, they are not adequately resolved. If they are to be addressed, fire-fighting personnel should report them regardless of whether some employees "were able or lucky to solve them […]; others may not be [or have been] able to manage."[90] Interoperability misconduct should be addressed so as to integrate a solution into the standard operating procedures of the co-participants in emergency organizations.

One of the obstacles that emerge while operations' personnel are on the incident-grounds is the time of intervention. In the British case, the ambulance service gives priority to the incoming calls concerning rescue operations. Nevertheless, when responding to major incidents, untimely response may cause delays in establishing the incident command structure. During one major incident the ambulances arrived on-site several minutes after the fire service and the police had set up their Mobile Command Units. The command structure could not be completed until all emergency co-participants' units co-located. Paramedics' role as *pacemakers* of rescue operations leads to disruption of the fire service's operations on site. Their authority on the rescue or recovery grounds is rarely

[90] Control supervisor, pers. comm., 14 April 2007.

disputed and fire-fighters operate under the paramedics' direction. Therefore since fire-fighters may be asked to reprioritize their actions and re-set their tactics and equipment on the incident-grounds their untimely response hampers the operation.

Incorporating the ambulance services to the FRSs is presented as a solution to the different structures and operating procedures in the BFRSs as well. As one of the chief fire-officers maintain: "Politics [are] above true concern for the public. If they had true concern and they wanted the very best for the public they would have one brigade tomorrow; one health service; one police force."[91] However, fire operations' personnel assert that centralization of ambulance services across the country indicates its failure. The ambulance service used to perform better when it was administrated by the local government, rather than after centralization: "Nowadays, now it can take them up to hour to arrive on the fire or rescue-grounds."[92] Although the government might find it easier to monitor the progress and viability of the industry if the chain of command is more uniform, the operations' personnel find it a lot harder if "something runs all over the country."[93]

6.7. Conclusion

Saussure argued that it is not only the space that defines language but the language that defines the space (Saussure in Bourdieu 1999: 59). Bourdieu claimed that language serves the needs of the market (1999: 92). In both cases, language serves as means to identifying the characteristics of the BFRS organizations. On the one hand, *free-speech* applies in routine and informal communication. On the other hand, *non free-spech* applies in formal communication during emergencies and regularly when specific channels are used, e.g. radio. What becomes clear from the analysis is that even *free-speech* develops patterns that reinforce the practices introduced by the *non free-spech*. Both these practices indicate that organization-members affiliate based on specific patterns either during formal conduct or informal interactions.

[91] Senior Fire-officer, pers. comm., 8 May 2007.
[92] Senior fire-officer, pers. comm., 1 December 2006.
[93] Ibid.

Moreover, the CCC is based on roles and operators inform operations' units regardless of their rank (figure 9). Information becomes an organizational asset rather than an exclusive prerogative of the senior fire-officers, as is the case in the HFC. In the BFRSs, the information is logged into the software system and so it becomes accessible to all personnel involved in the response. This infiltration of the technological systems deprives information of the symbolic power ascribed by the HFC practices.

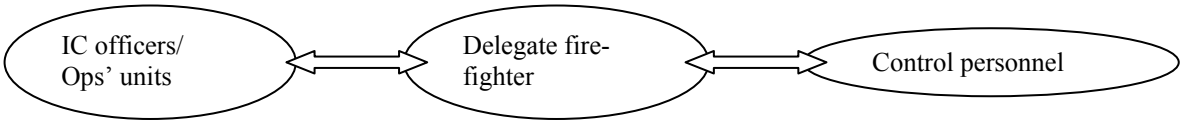


Figure 9: The actors engaged in the process of disseminating information on and off the firegrounds

This attributes an "instrumental" character to the incident transaction process that facilitates dissemination of the initial information without a personal assessment or assumptions about an emerging incident. Incident information is an organizational asset. The extent to which information is deprived of its symbolic power is indicated by the fact that sometimes incident information is diffused to emergency co-responders before the on-call officers are notified depending on the type and the intensity of the incident.

The instrumentality introduced in the information exchange processes by the BFRSs indicates the organizations' intentions to shift power from the communication actors to the process itself. Yet, it is the control employees who undertake the task of registering and diffusing the information and who, ultimately, become empowered. The BFRSs control personnel exercise control over the operations' units, "you are in control; you tell them when to go [to an incident]; they don't tell you […] Fire Control are in charge of mobilization and, with the information they gather from the caller, they make the decision of what goes. Sometimes the station does not agree with the decision and they will make a call […] [She advises the Control personnel:] Just say I am busy right now. Don't go into any arguments with them."[94] Moreover, in at least two of the BFRSs, during the assessment meetings that followed the response to a significant emergency, the control

[94] Control superintendent, pers. comm., 1 December 2006.

personnel discussed the operations' personnel's attitudes towards them during the response, when it is perceived as "unprofessional."[95]

Control and operations' personnel are expected to fulfil certain roles that have rather clear lines and, thus, the information exchange process is fragmented. As such, according to his/her role in the emergency response, each actor scrutinizes the section of the information transaction assigned to his/her position; they do not acquire an overall control which would enhance the status of one actor and demean the role of another. They register the incident information in the system so the system is empowered. Therefore, the process of assessing and disseminating information essential to the response is decentralized and less time-consuming. This attitude towards managing information is the outcome of a series of practices adopted on an administrative level.

[95] Control superintendent, pers. comm., 1 December 2006.

CHAPTER 7

BETWEEN THE HELLENIC AND THE BRITISH FIRE SERVICE MODELS: THE LUDWIGSHAFEN FIRE BRIGADE

The communication conduct among the LFB members bears similarities and differences with regard to the interactions of the HFC and the BFRSs personnel. This chapter details the patterns developed when the LFB organization-members interact during emergency responses; how civilians contact the LFB to report an emergency and communicate the incident information; how the control employees diffuse this information to the operations' personnel and, finally, in what ways the LFB personnel communicate with other fire-responder organizations involved in the mitigation of emergencies. These communication patterns reveal the nature of the organization conduct.

7.1. The incoming incident information

The starting point of the differentiation between the various FRSs investigated is the emergency number dialled in Germany; the 1-1-2. The German and the European emergency numbers coincide so as to simplify the communication practice between the distressed civilians and the responder organization. When civilians dial 1-1-2 from the rural areas, the call is answered by the CCC of the ambulance services. When 1-1-2 is dialled from the urban areas, the call is diverted to the CCC of the fire services. Depending on the content of the message, the personnel employed in the CCCs forward the call to the respective organization. When major incidents take place, the technical infrastructure supports conference calls between the fire, the police and the ambulance services.

In the LFB control and command centre, the roles of operators and dispatchers are integrated. The LFB operators/dispatchers receive the call, register the message either by writing the information on a piece of paper or typing it directly in the computer, initiate the mobilization process according to the brigade's standard operating procedures and log the

incident information they exchange with the operations' units during the emergency response in their computer system.

In the control room, the LFB employees are facing each other in an almost circular formation (figure 9). At the same time, they all maintain a visual contact with the EM. The circular arrangement of the operators/dispatchers' positions indicates intimacy and direct decision-making. It also shows that the operators/dispatchers share the same status. In all the other fire and rescue services examined, the supervisors' or officers' room oversee both the control employees and the incident information presented on the EM. In the LFB, however, the supervising officers occupy their own space without overseeing the actions of the control personnel. This spatial isolation of the supervising officers from the concurrent emergency conduct indicates that they are not directly involved in the conduct of the control personnel during emergency responses, unless requested by the control employees. They attend to the problems either technical or organizational emerging from the daily function of the control room but they do not engage in it its daily routines. So their offices are isolated from the daily action.

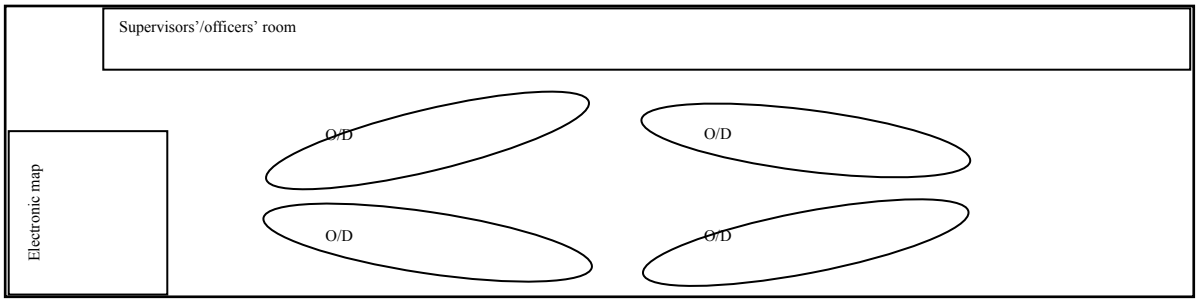


Figure 10: The positioning of the control employees in the LFB control room

The incoming information with regard to an emerging incident is usually provided by civilians and automatic alarm systems installed in private or public buildings. When civilians contact the LFB, operators/dispatchers request certain information. The following example I selected from a range of communicative conduct between the LFB control personnel and civilians to indicate how civilians – LFB control interact:

1	**Civilian**	***There may be a fire. I can see smoke. I am living in the building next to the X hospital, the one that is reserved for the personnel.***
2	**Dispatcher**	***What is the address?***
3	**Civilian**	**….. [It is unclear. He is speaking very fast]**
4	**Dispatcher**	***Repeat slowly and tell me which floor.***
5	**Civilian**	**….. [Address]*; the 6th floor.***
6	**Dispatcher**	***Are there people trapped? What is your name?***
7	**Civilian**	***I don't know. Maybe. My name is*** **[spelling]**

(Source: LFB – recorded conversations: fire in a hospital building, August 2007)

8	**Dispatcher**	***What is the location of the fire in the building?***
9	**Civilian**	***The fire is somewhere on the roof. I saw smoke when I was in the neighbourhood. It is the Z building.***
10	**Dispatcher**	***Units are already on their way.***

(Source: LFB – recorded conversations: fire in an apartment building, August 2007)

The incoming incident information was incomplete (1) due to the fact that the civilian who was the initial source of information appeared to be upset because of his witnessing the emergency (3). He stated where he was at that moment, but he neglected to mention that the compromised building was the one he was calling from. The dispatcher requested information about the location of the building (2). Although the caller seemed distressed, the dispatcher literally ordered him to repeat the message (4) and made an additional request at the same time. The caller was breathless and the information he was providing was so incomprehensible that the German employee who assisted me with the translation of the recorded conversations had to listen to the tape at least two times before he grasped the content of the information. After receiving answers to both requests the LBF operator asked the distressed civilian another two questions successively (6). Moreover, the LFB operators did not make an effort to elicit as much information as possible from the follow-up calls placed with regard to the already reported emergency (8-10). In another occasion during a fire that erupted in an apartment building (August 2007), one of the LFB operators received a phone-call placed by a civilian who knew very little German. The dispatcher was unable to understand what the civilian was trying to communicate and after listening to his colleague receiving calls from other civilians with regard to a "major fire",[96] he hung up the phone on the first non-German speaking caller assuming that this was the incident the caller intended to report.[97]

[96] Archive of recorded conversations, August 2007.
[97] Fieldnotes, August 2007.

The aforementioned conversations as well as the attitude towards non-German speaking civilians indicate how the LFB dispatchers address civilians who call the 1-1-2 to report an emergency. LFB dispatchers aim at instantly extracting the information necessary to mobilize their resources. In the process of extracting this incident information they disregard the human element: how involved the civilians are in the emergency, how their involvement shapes their perception of the incident and, thus, whether they are able to provide reliable information.[98] When LFB operators have extracted the incident information necessary to instigate the mobilization of their resources, they cease listening to the caller, which increases the risk of not obtaining information that may be essential. In contrast to the BFRSs control personnel and in a similar way to the HFC, LFB control employees are trained as fire-fighters and occasionally LFB operations and control personnel rotate. The fire-fighters' training involves courses in physics, chemistry, mechanic engineering, fire-fighting techniques and first-aid.[99] Communication with civilians is an issue that has not yet been addressed by the LFB and the skill of communicating remains underdeveloped. When fire-fighters are taught that their primary task is to engage in fire-fighting operations, communicating with civilians becomes a secondary task, often considered as a chore.[100]

When German-speaking civilians contact the 1-1-2, they may not be able to communicate incident information coherently. There are significant obstacles when communicating in one's own language: idiolect, accent, narration, coding and decoding processes according to the cultural background of the communicators. The non-German speaking civilians face an additional difficulty: to communicate incident information under abnormal circumstances in a foreign language; that is, in this case, German. LFB operators, who are usually not fluent in any language other than their own, are often unable to deal with foreigners. When LFB operators communicate with civilians who do not speak German, first they request the caller to seek assistance from German-speaking individuals in the proximity. Second, they ask their co-workers whether they speak the language of the caller. Third, they resort to an automatic translation system embedded in their software system, which usually proves effective. Fourth, they focus on extracting the address of the incident reported in order to send an appliance to inspect the location. Finally, the LFB operators

[98] Fieldnotes, August 2007: the control room.
[99] Fire and Disaster Control Law, 2 November 1981. Paragraphs: 213-250; Service Order: 'Inhaltsverzeichnis Lehrgang: Grundausbildung': LFKS Rheinland-Pfalz, Stand: 08/2004.
[100] Fieldnotes, August 2007: The control room.

may hang up the phone if the communication is impossible.[101] Thus, the LFB has developed a set of standard operating procedures so as to minimize their dependence upon the incident information civilians report.

On the other hand, the automatic fire-alarm systems provide instant, accurate, unambiguous, and non-verbal information with regard to an emerging incident. In the Hellenic case, it is civilians who are a more reliable source than control automatic alarm systems (see chapter 5). In the LFB, the content of the fire-alarm 'message' is straight-forward: there is smoke (or heat, depending on the type of the alarm system installed) generated at the X location, in the Z building. When the LFB personnel access the plans of the Z building, they establish that the fire is on the B floor, in the C partition, for example the main corridor or the rest room, in the Y office with the main computer systems etc. There is a designated point outside the premises, where the fire service can access the keys along with the schematics of the compromised building.

For the fire-alarm systems to provide reliable non-verbal information, the responsible parties of the industrial buildings where these automatic alarm-systems are installed – e.g. owners or civil engineers – are legally bounded to submit the schematics of the buildings and update the brigade with regard to any re-adjustments made during the buildings' operation.[102] The LFB *trusts* that this condition is met. *Trust* is perceived as the result of legitimization. Those who breach the *trust* (Vidal 2006), that is those who do not comply with the existing legislation are fined for instigating the unnecessary re-actions of the fire service. Evidently, the reliable information provided before an emergency occurs is as significant as the information provided during the emergency response. Developing a relationship between the pre-emergency and the emergency communication establishes the possibility of dealing with an urgent situation as if it was a routine event. The LFB SOP lead to this direction. For example, when an alarm system is set off, LFB personnel have a detailed plan according to which they inform certain officials depending on the intensity and the duration of the emergency. Whereas in the HFC the magnitude of the emergency is one of the main factors contributing to the disruption of the information exchange process, both in the BFRSs and the LFB the regulated communication conduct between control

[101] Fieldnotes, August 2007: The control room.
[102] Siemens Building Technology: Die Leitstelle der Berufsfeuerwehr, www.sibt.de.fire, accessed: 14/08/2007.

personnel and operations' units attempt to minimize its interference with the information exchange process.[103]

7.2. Communication during emergency responses

As soon as the necessary incident information is registered, LFB operators begin to process it. In the LFB, the communicative interactions between control dispatchers and station operators have been replaced by a loud-speaker announcing the type and the location of the incident, as well as a fax line that transmits information while the crews are preparing to mount their appliances. At the same time, in the fire-station, a designated fire-fighter inspects the content of the fax transmitted and accesses the dossier that contains information about the compromised area or building and the tactical mode the fire crews need to follow depending on the risks entailed in the area or the building affected by the fire.[104] The dossier is kept in the appliance that the on-duty officer is assigned to, until the response is over. Whereas the appliances are not equipped with maps of the area of the stations' jurisdiction, a map with the directions and all the available information concerning the emergency is provided by fax before the fire-engines leave their stations. The frequent training the LFB personnel receive facilitates the familiarization with the area that the fire-stations have jurisdiction over. These automatic notification procedures replace interpersonal communication, thus introducing a degree of objectification in the process of the disseminating of the initial incoming information.

Once the operations' units are on the incident-grounds, control personnel interact with the operations' officers via the IC in minor incidents or the Mobile Command Unit (MCU) during major incidents (figure 11). The MCU is a mobile command and control unit, a vehicle equipped with a computer system to serve the needs of the operations' personnel on the firegrounds, such as to enhance telecommunications during the response.

[103] Service Order: 'Ausbilderheft: Lehrgang Sprechfunker': LFKS Rheinland-Pfalz, Stand: 01/2004.
[104] Service Order: 'Einheiten im Löscheinsatz': Feuerwehr-Dienstvorschrift FwDV 3, Stand 2005.

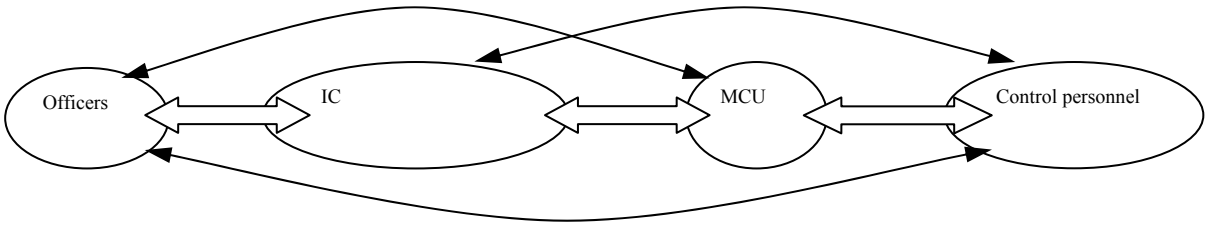


Figure 11: Communication practices between control and operations personnel

Operations' officers act according to the IC's instructions. The IC rides with the MCU along with a fire-fighter who drives the vehicle and mediates the communication between the IC and the CCC. When the MCU is not mobilized then the communication is conducted between the on-duty operations' officer and the control. The following example presents a usual communication conduct during emergency responses:

11	**Control**	***This is a fire in the building of the personnel of the BGUK [name of hospital] and it is on the 6th floor. There is no incoming automatic alarm from the hospital.***
12	**MCU**	***Understood.***
13	**IC**	***Which units are coming to the incident?***
14	**Control**	***The command vehicle and both platoons.***
15	**IC**	***Understood.***
…		
16	**Control**	**[To the MCU]** ***the automatic alarm is now incoming to the operations room.***
17	**MCU**	***Understood.***
…		
18	**Control**	***Situation report!***
19	**IC**	***There is a fire on the 6th floor; not an open fire; it's a fire without flames and a lot of smoke and the fire is located inside the kitchen. More details are coming soon.***
20	**Control**	***Understood.***
…		
21	**MCU**	***Support from platoon 1 is not necessary at the moment.***
22	**Control**	***Confirm.***
23	**MCU**	***Support from platoon 1 is not necessary at the moment.***
24	**Control**	***Ask platoon 1, to stand by.***
25	**MCU**	***Understood.***
…		
26	**Control**	***Do they need the B.A. vehicle.***
27	**MCU**	***Confirmed.***
28	**Control**	***Confirmed.***
…		
29	**MCU**	**[We have now]** ***confirmed that the fire was an empty flat where no one is***

		living and that the kitchen was completely burned. Smoke ventilation trial.
30	**Control**	***The fire was an empty flat where no one is living and that the kitchen was completely burned. Smoke ventilation trial. Appliance on its way.***
…		
31	**MCU**	***At the moment, they have one small nozzle in use.***
32	**Control**	***Understood.***
…		
33	**MCU**	***Fire under control.***
34	**Control**	***Fire under control. Understood.***
…		
35	**MCU**	***Fire extinguished.***
36	**Control**	***Fire extinguished. Understood.***

(Source: LFB – recorded conversations: fire in a hospital building, August 2007)

37	**MCU**	***Complete burning of a roof apartment. Units are preparing now to attack from the inside and the outside. There is already one civilian outside the apartment on the street and another one inside alive.***
38	**Control**	***Understood.***
39	**MCU**	***Both platoons are working and need support from another fire service so as to have city coverage.***
40	**Control**	***Confirmed; shall I ask the BASF to stand-by?***
41	**MCU**	***You should check this with the division chief.***
42	**Control**	***How long the will the incident response take because the division chief wants to know so as to arrange the city coverage.***
43	**MCU**	***Confirmed. We will give you the information asap. […] approximately 2 hours.***
…		
44	**MCU**	***Platoon 2 is only for support [meaning on the firegrounds; that means that they are available to attend any other incident].***
45	**Control**	***Understood.***
…		
46	**Control**	***Do you need the power company*** **[meaning on the firegrounds; the power company is responsible for cutting the power off the entire building. Cutting the power in one of the apartments is the LFB responsibility]*?***
47	**MCU**	***We will re-contact you control.***
…		
48	**MCU**	***We need the power and the gas company*** **[in the State of Rhineland-Palatinate it is a joined service provided by the municipality and called TWL].**
49	**Control**	***Confirmed.***
…		
50	**MCU**	***We need the BA unit.***
51	**Control**	***Understood.***
…		
52	**MCU**	**[To the BA unit]** ***where is your location?***
53	**Unit**	***Directly behind the TWL.***
54	**MCU**	***Where is that exactly?***

55	**Unit**	***X* [location]. *X* [location]**
56	**MCU**	***Understood.***
…		
57	**MCU**	***Report to control: 2 flats are burned, 1 person out on vacations. For the other we must call the Z.*** **[this is the name of a special service provided by the municipality for people who are in need for an apartment for a few days in case, for example, their apartment has been destroyed by a fire].**
58	**Control**	***Understood. We were informed that the police have notified the department*** **[that provides this special service].**

(Source: LFB – recorded conversations: fire in an apartment building, August 2007)

In the LFB, the instrumentality of the communication conduct among the participant actors in an emergency response is primarily located in the nature of the exchange and, secondarily, in the structure of the speech used by the actors involved in the response. The interactions between the actors engaged in the response are preset and brief: the one requests and the other replies. The actors do not communicate systematically but on a need-to-know in order to-assist basis. Communicator A requests, communicator B replies and A confirms the reply (e.g. 18-20; 21-25; 26-28). Two words appear frequently during the emergency communication episode between the LFB personnel: *understood* and *confirm(ed)*. *Understood* is used to acknowledge first, that the message is received and, second, that the content of the message is accurately decoded by the receiver. The first point refers to the functionality of the channel: the radio signals are clear and noise does not obstruct the transmission of the message. The second point depends on the tacit knowledge of the personnel created by their habitual practices along with the implementation of the LFB standard operating procedures. The phrase: "there is no incoming automatic alarm from the hospital" (11) indicated first, that the operations' units had to search the premises so as to locate the fire. Second, if the fire emergency was intense, the automatic alarm would have signalled the control. Finally, the incident information the civilian reported was probably unreliable. The transaction of line 16 contradicts the content of line 11 and indicates that the fire-alarm high reliability system verified the information provided earlier by the civilian.

The terms *confirm* or *confirmed* relate to the verification process. The verb *to confirm* in its imperative mood – *confirm*! – instigates the verification process. The participle *confirmed* signals the completion of the process. The verb *to confirm* connotes certainty. Once the

information is confirmed, it becomes undisputed. The undisputed information is the basis for organizational action. It catalytically affects the decision-making process.

As in the Hellenic and the British cases, repetitions are an essential part of the verification process (21-23; 29-30; 33-34; 35-36). The communication actors repeat terms such as *understood* or *confirmed*, or the entire content of the message reported. Thus, repetitions contribute to enhancing the certainty that the actors require to make their decisions during emergency responses. Repetitions are also used as an instrument that expresses remorse with regard to miscommunication. At least one conduct indicates that when a control operator requested that the head of the B.A. operations' unit, dispatched on the incident-grounds, reported their exact location, the reply he received was that the unit was just behind the TWL. Nonetheless, the TWL unit is not managed by the LFB and, thus, the control had no way of knowing the exact location of the TWL when the operators contacted the LFB BA unit (42-46). The answer the head of the BA unit provided was obscure and on that realization, the fire-fighter in charge of the unit repeated their location twice. To further achieve instrumentality, LFB personnel avoid the phatic use of language. In order to be precise and laconic, their utterances bear a certain meaning. They are not just used as filler phrases. Thus the actors' requests are often bluntly uttered (e.g. 18).

The aforementioned cases indicate that each of the actors engaged in the emergency response according to their role scrutinize the section of the information transaction assigned to their position in the emergency communication process (e.g. 3-4). Therefore, the process of assessing and disseminating information essential to the response is decentralized and less time-consuming. This attitude towards managing information is the outcome of a series of practices adopted on an administrative level. Roles and procedures are prescribed and, generally, accurately performed under the authority of the IC who assures the implementation of the procedures.

The instrumentality introduced in the information exchange processes by the LFB reveals the intentions of the organization to shift power from the communication actors to the process itself, similarly to the BFRSs. Yet it appears that the "custodians" – the control employees – effectively themselves become powerful. As impersonalization appears to lead to disempowerment, in effect power is redistributed among organization-members;

control employees become the empowered actors. It is often the case that the LFB control personnel lock the Headquarters officers out of the control room. Higher-ranking officers employed in the HQ start flocking in the control room as soon as an emergency occurs in order to "satisfy their curiosity."[105] The LFB control personnel indicate that they need a quiet environment and therefore they occasionally isolate the control room (figure 9). Moreover, operations' units do not generally disregard the orders issued by control personnel. However, the transcripts of the communication conduct between control and operations' personnel are incomplete. Control employees register only that piece of information they consider significant to the emergency response process, according to their standard operating procedures.

7.3. Inter-organizational communication

The instrumentality of the information exchange process and the role-oriented control of the incident information are revealed in the inter-organizational communication as well. The LFB affiliates formally with emergency co-responders in order to maximize its task performance. For example, the supplier of power, i.e. gas and electricity, the *Hausmeister,* disconnects the power supply outside the compromised buildings in emergency responses. The fire service is responsible for disconnecting the power inside the building, unless "they say please"[106] to the supplier, in which case they facilitate the service.

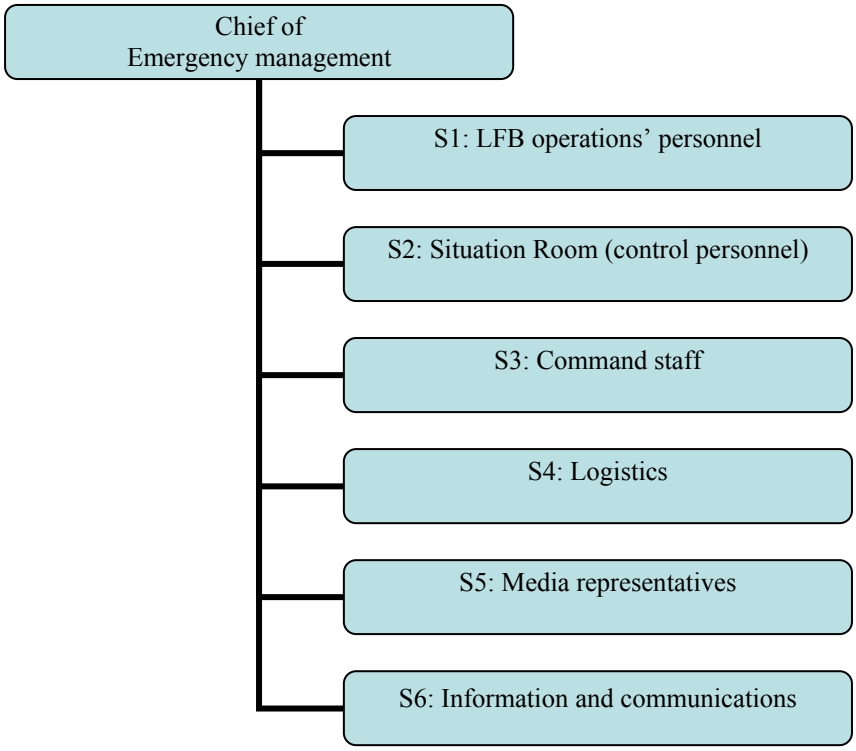
59	**Control**	***We are going out to an incident at X street; we have a fire in the roof.***
60	**Police**	***Confirmed; we are also coming.***
…		
61	**Control**	***We are going out to an incident at X street; we have a fire in the roof.***
62	**Ambulance**	***Confirmed. Units are on their way.***
…		
63	**Police**	***[…] the flames are one meter high.***
64	**Control**	***Confirmed. On our way.***

(Source: LFB – recorded conversations: fire in an apartment building, August 2007)

[105] German control supervisor, pers. comm., 15 August 2007.
[106] Operations' officer, pers. comm., 15 August 2007.

According to procedures, the LFB reports to the co-responder organizations their participation in an emergency response. Their interactions are brief and confirmation is provided as soon as the information is received (59-64).

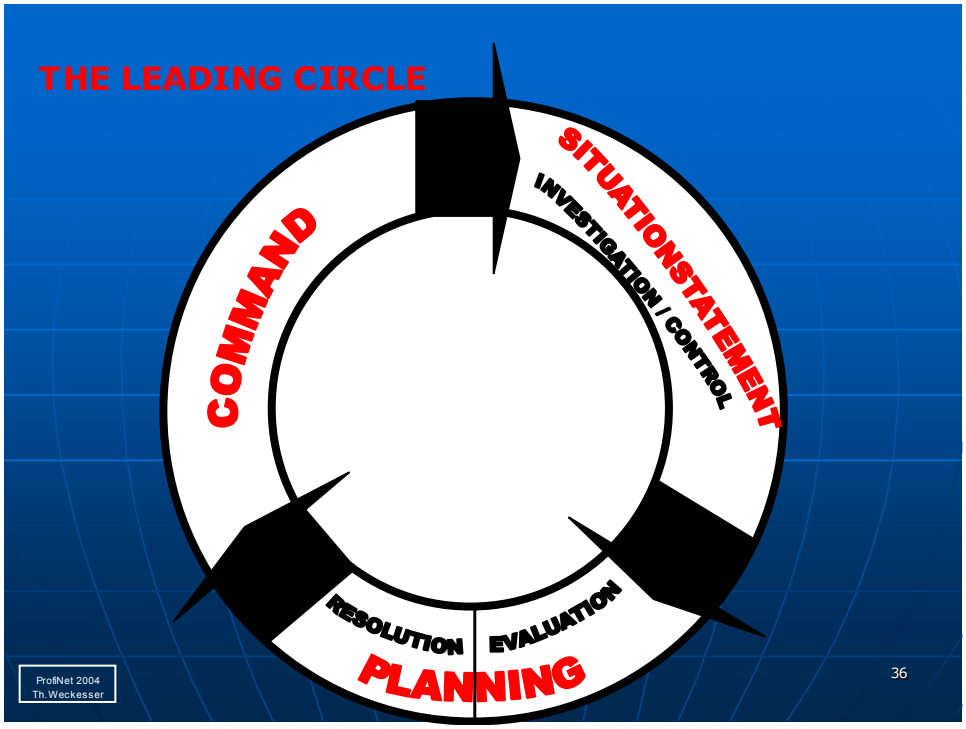
In charge of the LFB incident command system is the chief fire-officer (figure 12 and 14). He oversees the actions of the operations' personnel, the control employees, the officers in charge of the various divisions involved in the response, the management of resources and finances. He also monitors the information that the organization diffuses with regard to an emergency to the local media or national press and he makes sure that the technical issues that surface during emergency responses, such as malfunctions in radio networks and mobile telephony etc, are being adequately addressed.



Source: The LFB control manual

Figure 12: The LFB ICS

Figure 13 indicates how the LFB circulates incident and organizational information that supports the decision making process during emergency responses.



Source: Ludwigshafen Fire Brigade, slide from the material presented in a seminar and addressed to City Hall employees in April 2004.

Figure 13: The flow of communication prior, during and after emergency responses

Emergency planning illustrates the processes adopted during the fire and rescue operations. After each operation, an investigation takes place so as to assess the response. Misconduct or effective initiatives outside the prescribed processes are tested and adopted by the organization so as to update the existing emergency planning.

7.4. Affiliations with the police and the ambulance service

The LFB engages in an initial communicative interaction with the police in order to inform them about an emerging incident. According to the LFB standard operating procedures, as the emergency response of the Brigade progresses, the police may be contacted if the IC considers the police assistance necessary. The police are obliged to report any incident information to the LFB. When they are present on incident-grounds, they always wait for the fire service to complete their operations and give them permission to launch their own investigation. In the Ludwigshafen institutional command structure, when the LFB is the predominant responder the police assume an auxiliary role. The LFB usually functions as

the leading part of a committee that decides on the action taken by the first-responder organizations on emergency grounds (figure 14).

In the LFB case, affiliations result from internships. Exchanging personnel facilitates the learning of the organization's routines. For the LFB, *good practice* is sustained by creating inter-organizational co-operation in an intra-organizational context. Police officers are offered a two- to four-week internship in the fire service and vice versa on an administrative rather than an operational level, so as to achieve a better level of understanding intra-organizational communication. LFB personnel maintain that, by exchanging this type of implicit knowledge, both the police and the fire service are gradually able to cooperate with minimal friction.[107]

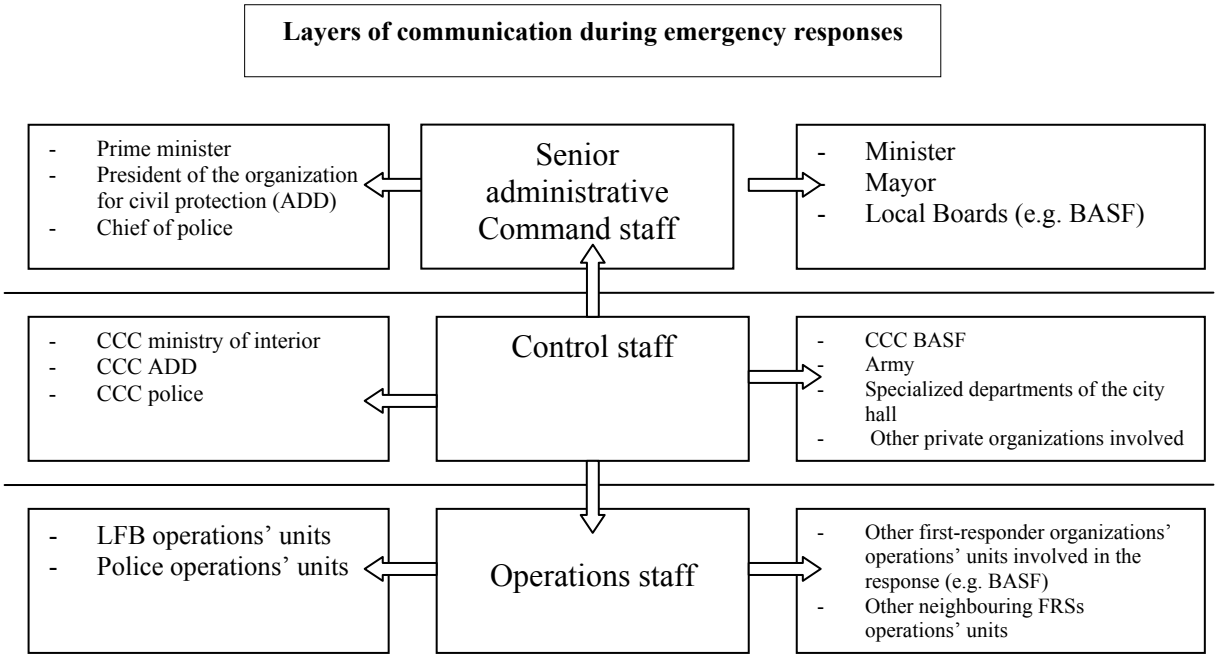


Figure 14: A detailed incident command system plan

On the emergency-scene, the communication between the LFB and the police is formal. They experience a lesser degree of interdependency than the HFC on the incident-grounds. Once they are there, the police patrols interact with their CCC about the progress of the emergency response. This may present an obstacle when communicating during major

[107] Pers. Comm., 5-17 August 2007.

incidents. In order to achieve inter-operability and overcome the existent information exchange process, the organization proposed to create a joined CCC. The LFB claimed that plans laid out or efforts made to join the CCCs of the police and the fire services, were obstructed by the police's unwillingness to reveal information that would not directly involve the fire service, as was the case with the BFRSs.

The LFB falls into the description that Hofstede (1994; 2005; in Schneider and Barsoux 2003) provides for the German model presented as a 'well-oiled machine'. The LFB disseminates the type of information necessary for the police to launch their own operations. Therefore, they interact based on the tasks necessary to undertake according to the organizations' obligations. These interactions are based on rules and procedures that have turned into routines. Their routines very rarely change and, if a need for change is identified they undergo testing and numerous discussions in order to draft, introduce and implement changes which will eventually result in structural solutions. Furthermore, the decision-making on the incident-grounds is compartmentalized and police do not act unless the fire and rescue service consent.

The ambulance services present the LFB with a structural obstacle. Although the ambulance services time of response does not exceed the maximum time necessary to resuscitate a victim, LFB personnel considers the immediate presence of an ambulance on-site as imperative to achieving *good practice*. Nonetheless, the organizational structure of the ambulance service and their standard operating procedures differ from those of the fire service. Ambulance services are provided by private organizations and their minimum time of responding to emergencies as agreed between them and the government varies from the time of intervention established for the fire service.

In order to bridge such differences in the emergency *modus operandi* of the organizations, the LFB asserts that by the end of 2010, the CCCs of the brigade and the ambulance services will be integrated, although incorporating the emergency health services into the brigade is their intention.[108] In this planning, the ambulance personnel will fill the operators and dispatchers positions in the CCC from 08:00 until 16:00, which according to

[108] Chief fire-officer, senior fire-officers in personnel and resources, 7, 10, and 14 August 2007.

the statistics are the prime time of calls requiring their skills.[109] Ambulance personnel will also be provided with basic fire fighting training. In the long term however, the LFB maintains there will be reduction in costs both economically and organizationally. As to the latter, the fire and ambulance service were provided by the LFB until the early 1980s, when, for political reasons, they were divided. Hence, the fire personnel have previous organizational experience in this type of structure (Weckesser 2003).

7.5. Conclusion

The LFB attempts to accomplish instrumentality in all aspects of the communication conduct during emergency responses. First, the organization decided to adopt the 1-1-2 European emergency number in order to achieve on the one hand technical standardization. The call no longer has to be re-routed, as is the case with the 9-9-9 emergency number answered by a BT operator or the Hellenic case that operates on three distinct emergency numbers: 1-9-9 (HFC), 1-0-0 (police), 1-6-6 (ambulance service). On the other hand, dialling one emergency number simplifies the communication conduct between civilians and the emergency services.

Second, organization-members minimize and depersonalize their communication conduct during emergency responses. When the appliances from both the central and the north station are mobilized, control employees communicate with the operations' units on the incident-grounds via the MCU. Moreover, the LFB personnel underplay the role of the non-LFB personnel, such as civilians, in the organizational communication conduct. When inaccurate, civilians' input is perceived as interference with regard to the organization's decision-making process and actions on-scene.[110]

Finally, the LFB is in the process of redefining its standard operating procedures. The existing SOP are general guidelines of action that apply to the majority of the emergency responses: how fire-fighting personnel mount the appliances, how the mobilized units proceed on-scene, how the fire-engines are positioned on the incident-grounds, how the

[109] Fieldnotes, August 2007.
[110] Fieldnotes, August 2007: The control room.

crews are deployed once they are on-site. The LFB intends to introduce more detailed and thorough procedures.[111] The main reason for initiating such changes is not the inadequacy of the existing SOP: "they work just fine because they are the very rational steps you need to take in an emergency response."[112] If and when the high-ranking officers are content with testing the details of the updated procedures then the changes will be introduced because "the thoroughness in the procedures will define who has responsibility of the potential misconduct during emergency procedures."[113] So the reason for such thoroughness is to hold organization-members accountable for their actions and punish them for the operational misconduct rather than to facilitate the collaborative action on the incident-grounds.[114] From a task-oriented representative bureaucracy (Gouldner 1954) bearing some of the characteristics that apply to an *organic* organization (Burns and Stalker 1961) such as the flexibility the action based on information and the focus on the ends rather than the technical means (table 17: 273), the LFB is welcoming parameters from what Gouldner defines as punishment-centred bureaucracy (table 20: 280). In order to become a punishment-centred bureaucracy where rules are enforced by the LFB officers who receive the status gains, the organization requires a more *mechanistic* function (Burns and Stalker 1961) that necessitates a more elaborate set of rules, specialization and isolation with regard to the actions taken by the operations' units on-scene (table 17: 273).

Furthermore, intra-organizational routines presuppose an inter-organizational code of practice. The case of the LFB has emphasized the fact that the actions of one organization are taken for granted in order for the other organization to deploy its resources to accomplish a joined task. The LFB fire-fighters plan their operations according to the building schematics provided to them either on paper or electronically. Fire-fighters trust that what they access is updated and reflects reality. Schematics are replaced whenever the status of the building changes, unlike the Hellenic or the British case. For example, in the British cases, the central government deregulation policies have preoccupied fire investigation departments due to the fire employees' inability to control whether safety standards are adequately adopted in the constructions. That is the difference between Britain (deregulation, up to private initiative) and Germany (regulation, followed and punished when not) and Greece (regulation, rarely followed and rarely punished). So, when the alarm-systems malfunction, the responsible parties for installing or preserving

[111] LFB personnel, pers. comm., August 2007, June 2008 and April 2009.
[112] Chief fire-officer, pers. comm., 8 August 2008.
[113] High-ranking officer, pers. comm., 11 August 2008.
[114] Fieldnotes, August 2007: The control room.

them are fined. The responsible parties are also fined when they fail to report the structural adjustments of the buildings and not re-submitting the renewed schematics of the premises. The interconnection between prevention – offered, for example, by the installation of the automatic alarm systems – and intervention may cause or sustain extra- or intra-organizational crisis (Rosenthal et al. 2001; Rosenthal et al. 1989: 445-447).

The LFB tends to introduce elaborate procedures, minimize the input of non-LFB organization-members, such as civilians, and render the mobilization processes automatic in an effort to maximize the effectiveness of the organization when responding to emergencies. The primary task of the LBF, and the HFC, is to enhance intervention rather than engage in servicing the community on the level of prevention, as the BFRSs do. This tendency of the fire and rescue organizations towards adopting more elaborate and thorough action plans and uniformed practices relate to the concept Porfiriev (in Rosenthal, Boin and Comfort 2001: 343) introduced: *transbounderization.* We have presented this concept early in the introductory chapter as an additional, intrinsic characteristic of crises. As crises attain similar characteristics, responding to crisis develops similar techniques. Thus, emergency plans tend to acquire similar 'steps'. Yet, how these steps are followed depends on the discretional power of the various organizations that take them.

CONCLUSION

BUREAUCRATIC PERFORMANCES IN THE FRSs

Organizations such as the fire services are seen as communication events (Pepper 1995) and a platform where shared cognitive meanings and shared value commitments shape the actions of the interactive agents (Manning 1992; Hofstede 2005). Perrow (1999), Turner and Pidgeon (1997) argue that crises are the outcome of communicative disruption in organizations. Such *ruptures* (Lagadec 1993) result from the dynamic relationship between structure and agency (Goffman 1990; Weick 1993). This relationship develops on a stage (Goffman 1990) where the roles may be defined (Merton 1965; Thompson 1967) according to a set of rules and procedures (Burns and Stalker 1961) and improvisations are necessary (Schneider 1992), likely or bound (Perrow 1999) to occur.

8.1. Communicating in the fire and rescue organizations

The fire and rescue organizations are bureaucracies. Fire service personnel have official duties and specified jurisdictional areas. They usually operate according to a set of rules intentionally established, i.e. the standard operating procedures (SOP) and the emergency plans. The FRSs officials are subject to orders issued either by the Ministry of the Interior (HFC), the Fire Authority (BFRSs), or the City Hall (LFB). The fire and rescue organizations have divisions with a specified sphere of authorities, such as the CCCs. These divisions follow the principle of hierarchy: operators receive calls, dispatchers mobilize the organizational resources, superintendents monitor the progress of the mobilization, and senior officers (HFC/LFB) or managers (BFRSs) address issues emerging from the daily operation of the control room directly or indirectly related to launching and monitoring emergency responses. The chief fire-officers of the organizations are appointed by a superior – usually the political – authority. Other high-ranking officials are appointed ideally according to their technical qualifications, often by affiliation with the political authority (Mouzelis 1971 and 1978; Charalambis 1989).[115]

[115] Fieldnotes, May 2005-June 2008.

Their promotion depends on seniority in the HFC, or primarily on achievement in the BFRSs[116] or both on seniority and achievement in the LFB.[117] In all cases, advancement depends on how the higher-ranking assess the performance of the lower-ranking personnel. FRSs employees are usually compensated according to their rank and their working hours. In this context, emergency management as the primary objective of the fire and rescue organizations becomes a bureaucratic process with the incident command system serving as its supreme model of effectiveness.

Do the FRSs bureaucracies adequately manage the emergency, routine and set events they encounter almost on a daily basis? If not, what other way(s) of dealing with these events could be more effective? On the one hand, the US reports usually titled *'Lessons learned'* recommend that the best way to deal with emergencies is to develop and infallibly practice the ICS, as an ideal bureaucratic procedure. Was a flawless practice of this system ever achieved in any of the episodes examined throughout the thesis? I believe not. On the other hand, others may argue that an organic structure may be more effective than the bureaucratic approach, as British professionals suggest (Bain et al. 2002) but have not yet achieved in practice. So, what did the episodes examined indicate about the organizations involved?

The empirical data analyzed indicate that the FRSs face a triple challenge: they should manage other organizations' crises (such crises include those occurring in large chemical and oil factories) as well as natural disasters (such as earthquakes and forest fires), and, at the same time, they must deal with their own crises (for example, failure to communicate because of power-related issues, lack of operating procedures or inability to adapt to the unanticipated circumstances of the emergency).

The management of emergencies as intrinsic characteristics of organizations is the object of two significant theoretical approaches. The first asserts that organizations are unable to prevent human error. Perrow (1999: 369) emphasizes that "no matter how hard we try we will still have accidents because of intrinsic characteristics of complex systems." The

[116] Fire Services (Appointments and Promotion), Regulations: SI No 436, 1978; Office of the Deputy Prime Minister, 2002 b., Best Value Performance Indicators 2000/01.
[117] Fieldnotes, August 2007.

inevitability of error leads to a search for the conditions that will cause a crisis. This approach sees the management (Turner and Pidgeon 1997), the rationally organized bureaucracy, the tight-coupling in technology (Perrow 1999) and the environmental pressures (Sagan 1993), that is the external emergencies in the case of the fire and rescue organizations, as culprits. More optimistically, high reliability theorists develop a second approach through which well-designed organizations are understood as being capable of absorbing human errors and external pressures (Rochlin 1996). Both approaches consider "bureaupolitics" and resource management (Boin and 't Hart 2003), dilemmas created under severe stress, uncertainties as to how to launch an emergency response due to lack of or inaccurate information, faulty initial classifications, and changes in the nature of crises, as major problematic areas (Kouzmin and Jarman 1989; Turner 1992).

The episodes examined indicate that intrinsic *ruptures* (Lagadec 1993) are unavoidable. FRSs are not *tightly-coupled systems* (Manning 1992; Perrow 1999) with little or no "slack or buffer or give between two items" (Perrow 1999: 90). They are human organizations that develop a structure and a culture. Often, the choice of structure and the negotiation of this structure on a daily basis amongst the organization-members offer sufficient cause for *ruptures*, as I intend to discuss shortly. Fire and rescue organizations are complex systems. They combine human interactions with occasionally *tightly-coupled* technical systems and they necessitate that organization-members perform on multiple stages at the same time.

The episodes investigated emphasized that emergency performances are made possible via communication. Each "performance" is a *game* (Goffman 1990) of regulated improvisation. As *games*, performances are governed by rules. Emergency plans, for example, are intended to regulate the actions of the organization-members on- and off-scene. In addition, unanticipated circumstances during emergency responses require innovative initiatives, namely actions that are not prescribed in the existing procedures.

During the initial stage of the mobilization process whereby control personnel mobilize the organizational resources, communicative interactions between organization-members are "linear". Linear interactions "occur [in an] anticipated production sequence" (Perrow 1999: 77-78). The seemingly uncomplicated linearity in the information exchange process implies simplicity in the communicative interactions. Yet these interactions are not

'simple' processes but rather complicated conduct that may affect the deployment of the command structure and the decision-making process on the incident-grounds.

Linearity is generally breached by lack of, or failure to, understand and follow SOP. These are formalized routines directing the interactions of organization-members under various foreseen or unforeseen circumstances. They arrange the information flow between organization-members across positions and ranks in the FRSs. What appears to impede emergency responses is either the absence of set procedures or the intentional or unintentional lack of implementation of these procedures. SOP are part of the formal structure of the organization and, as such, they define its rationality. The more prescribed the procedures, the more formal the organization and the more elaborate the role system appears to be, as is the case in the BFRSs and to a lesser extent in the LFB. If SOP are imperative rather than indicative, initiative as a dynamic component of reaction on the incident-grounds may be obstructed. For example, when managing emergencies in the BFRSs control employees search for and implement the protocol that matches the circumstances surrounding the emergency. Nonetheless, rigidity of SOP should be avoided as prognosis or prediction is limited by past experiences (Perrow 1999; Beck 2002) and circumstances surrounding the emergencies at hand may differ substantially from the ones described in the procedures.

Both intentional and unintentional breaching of SOP emphasizes the meanings attributed to these set procedures by organization-members (Weick 1993). The intentional breaching underlines, first, the resistance of organization-members to formalization and power distribution as defined by the command structure of the organization. In this context, self-dispatching, for example, is an act of mutiny that takes place on the incident-grounds. Second, intentional breaching of SOP emphasizes the reluctance of organizational members to embed a set of procedures that may have proven ineffective. Often, emergency plans are outdated and thus organization-members need to redefine their conditions as the operations progress. Finally, the intentional breaching emphasizes the actors' unwillingness to adopt practices whose rationale has not been explained to them by those organization-members who have introduced or reproduced these practices on a strategic level over the years.

Unintentional breaching reveals the relation between agency and structure. Agency is the action of organization-members and the understanding they achieve with regard to the organization's routines and practices. When an unintentional breach in the prescribed procedures occurs, it becomes apparent that there is a gap between, on the one hand, the meaning the administration of the organization that is involved in reproducing the formal structures intends the procedures to have and, on the other hand, the actual meaning attributed by the actors in practice (Scott 2004: 25-33). The agents interpret and reproduce the structure of the formal organization constantly and continuously.

Linearity in the information exchange process is replaced by increasing complexity after the initial stage of the mobilization. According to Perrow, complex interactions occur outside "the normal production sequence either by design or not by design" (1999: 77-78) and can be both linear and non-linear. In the case of the FRSs, however, this complexity does not occur outside the "production sequence." It is part of this "sequence." Complexity emerges from the unanticipated outcomes of the communication conduct among organization-members. Whereas SOP exist to minimize the impact of the unexpected on the actions and the reactions of the organization-members when engaging in emergency responses, and, hence, simplify the 'production sequence', there are variations from this 'ideal' standard. This element of the unexpected, that potentially complicates the organization's performance, derives from the attitudes organization-members develop when they interact on a daily basis. Habitual practices may penetrate the command structure in the rank-system of the HFC and the LFB, or the role-system in the case of the BFRSs, and impose their own regularities over the formal procedures. For example, one of the BFRSs control personnel maintained that, despite SOP, they would not wake up "the X and Y in-duty officers in the middle of the night, no matter what the rules said, unless absolutely necessary, because they would not go back to sleep and they had to come in to work again next morning."[118] This means that, if an unexpected development occurred in the emergency response, the decision-making process would have been delayed.

Moreover, both the distribution of power amongst the interactive agents and the symbolic power of information shape the attitudes of the actors and defines the frequency of their communicative interactions. For example, in the HFC, it is habitual and not regulated

[118] Pers. comm., 3 December 2006.

practices that indicate that senior officers should be hierarchically informed – the lower-ranking inform the higher and the higher notify the highest-ranking personnel – at all times about major incidents occurring. So, interactions become more complicated as uncalculated cultural issues intervene in the 'production sequence'. These issues are a process and a product of communication (Geertz 1991; Bantz 1993; Pepper 1995; Turner and Pidgeon 1997), a substantial part of an organization's culture. Culture provides an understanding of the environment produced and shared by the organization-members (Deal and Kennedy 1982; Conrad 1983; Smircich 1983; Sathe 1985; Pace and Faules 1989) and "the means to accomplish the organization" (Putnam, Phillips and Chapman 1996: 375-408; Wright 1994). Cultural issues interfere with the rational mechanistic – or bureaucratic – production sequence. In the HFC, senior officers seek information relevant to emerging incidents, especially when these incidents – whether major or minor – attract the attention of the media. Demonstrating to their super-ordinates that they are well aware of the organization's conduct, higher-ranking officers become the protégés of the highest-ranking officers, hence achieving an advantage over their 'non-knowledgeable' counterparts with regard to their advancement. Although knowledge is the organization's indispensable asset and the "knowledge worker" appears as "the single greatest asset" (Nonaka and Takeuchi 1995: 7; Bourdieu 1999), the episodes investigated indicate that the worker does not necessarily serve as a basis for organizational stability and performance.

In the case of the BFRSs, attaining such knowledge does not entail the same value in the organizations' conduct. Relevant information concerning emergencies is equally accessible to every employee involved in the emergency response and it is distributed according to procedures, unlike what happens in the HFC, where, as indicated earlier, the dissemination of information is disrupted or its content fragmented or altered. In the LFB, officers are task oriented and therefore predominantly interested in attaining the information necessary to achieve a successful outcome with regard to their assignment.

Nonetheless, bearing in mind that "individuals attempt to realize ends other than those of the concern as such" (Burns and Stalker 1961: 98), I draw upon Crozier (1964) to remark that each group of organization-members can be seen to have a certain amount of control over strategic information, valuable to other groups that can define the organization's performance (Hofstede 2005). The power of each group depends on the uncertainty the group can create within other groups, by controlling essential information; thus, one group

may be able to control something that another wants. If the action taken on the incident-grounds depends on the timely dissemination of accurate information crucial to the response, then one can appreciate the importance of the information exchange process. Then, it becomes clear that power and control can be exercised through distorted communication (Conrad 1983; Deetz and Kersten 1983).

Agents' perceptions reveal how the formalities of organizational structure and the formalized role-playing determine the distribution of power amongst organization-members and how these employees react to this flow. *Vertical* (upward or downward) and *horizontal* communication indicates that the power flows across specific networks (Serafetinidou 1991): across ranks, superior and subordinates; across administration, managers, and watches, and, finally, across watches and control personnel. It may either be overt in the case of the formal command structure or covert in the communicative interactions between male and female employees, or operations' units and the CCC. There are indications that the power exercised between the interactive agents may be coercive – the fear of punishment – or referent – the appreciation of the powerful (Etzioni 1961). Expert power is a form of power that may instigate a discourse with the traditional hierarchical structure of the FRSs quasi-militaristic regimes. Related to power, blame-games and whistle-blowing represent a form of exercising overt and covert control over organizational conduct, as in the case of the Weberian "secret sessions" (Weber 1947). Covert control is linked to informal networks operating outside the boundaries of formal procedures, with the intent of disclosing wrongdoings. The existence of power, control and conflict reveals the interdependency of organization-members along with the incompatibility of the organization-members' intentions. Communication is a means of transmitting these intentions.

Therefore, the stakes emerging from exchanging incident and organizational information as the fundamental process for making critical decisions and taking actions on the incident-grounds are the rules, the regulations and the procedures of the organization – the formal structure – and how they are practiced by organization-members. The *mechanistic* or *organic* system (Burns and Stalker 1961) that defines the character of the management – the decision-making process and the action taken on the incident-grounds – cannot be defined only by what has been regulated as the formal structure of the organization but also

by how this structure is perceived, interpreted and practiced by organization-members in their daily conduct.

8.2. Agents in action

Emergency communication conduct indicates that internal *rupture*s affect the management of external emergencies. *Rupture*s often occur in the role-set. Organization-members in each of the FRSs investigated have distinct status- and role-sets. Each status- and role-set creates certain expectations and as "given social front[s] [they tend] to become institutionalized in terms of the abstract stereotyped expectations to which it gives rise and tends to take on a meaning of stability" (Goffman 1990: 34). Status- and role-sets in the various FRSs create different expectations amongst the agents directly or indirectly participating in emergency responses. Failure to respond to these expectations affects the action off- and on-scene.

When a fire-fighter disobeys evacuation orders or units self-dispatch, or the incident commanders decide to disregard procedures and not pass on any information to the control room or even interfere with the control room's tasks, or when the operating procedures vary between the fire and rescue organizations involved in emergency responses, then actions on the incident-grounds may be jeopardized. The rest of the agents acting on-scene have less than the essential information to operate safely on the incident-grounds. Consequently, they are not confident that their co-actors are fulfilling their duties or that the information they are being given is accurate.

The above *ruptures* are related to how organization-members involved in the response interpret and reproduce the formal proceedings of their organizations. Formal organizations are challenged by agency (Goffman 1990), the daily interactions of the organization-members. During these interactions, actors interpret the formal structures in light of their own sentiments and aspirations. Thus, formal structures are partially re-invented each time a fire-fighter explicitly or implicitly refuses to follow the instruction of his/her commanding officer on-scene and continues with what he/she perceives as the best move in a given situation.

Formal organization dictates the '*should be'* action of the organization-members. The trichotomy of *can*, *shall* and *must* was first introduced by Ralf Dahrendorf (1968: 38-44), who used these concepts to define permissive, preferential and mandatory social action respectively. The '*should be*' is the script, the rules that are in place to act as symbols (Clarke 1999) and to govern the organizational action. The '*should be'* also contains the notion of the '*could be*'. The latter represents how the organization distributes its resources to respond to its objectives. Does the X fire service have enough fire-engines to respond to an industrial disaster in the nearby power plant or would they require the assistance of the neighbouring fire service Z? The emergency plan, as a rational aspiration of the organization, takes this parameter into account in order to dictate the necessary steps to deal effectively with the emergency. There is also the '*to be*' action. The '*to be*' is what actually takes place: a successful implementation of the emergency plan, a misunderstanding due to differences in emergency procedures or the disobeying of orders. The practice is the outcome of agency, the daily interactions of the organization-members. The notion of the '*must be*' is a more complex concept. It may identify with the '*should be*' or instigate an action completely different to the one prescribed by the scripts. It can be considered as the intermediary phase when the organization-members negotiate the formal procedures and decide how to act during emergency responses. Goffman (1990) also refers to an '*ought to be*' action that is instigated by the moral obligation of the individual's actions due to his/her aspirations and his/her commitment to the organization.

The *ruptures* introduced in between the aforementioned phases are the "the source of disturbance [and] instability" (Merton 1965: 368-384) in the role-system that defines the structure of the organization. I do not imply that deviating from formal procedures creates *rupture*s. It is often the procedures that interfere with the potential initiative and innovation of organization-members in their dealings with the unanticipated parameters of emergencies.

The first set of *ruptures* occurs when the agents negotiate the formal rationality of the organization and the second is due to the distribution of power both between the status-occupants and between the members of the role-set (Merton 1965: 372-384). In order to investigate the first set of *rupture*s, I shall refer to how language is used in communications. The structure, the '*should be*', specifies that actors should use the appropriate formal language when contacting communication via radio or telephone.

However, the '*to be*' action indicates differently. For example, in the HFC actors may, first, use the formal language on radio responding to the expectations of the formal organization. Second, they may also use casual language on radio: "Hey Geooooooorge!"[119] was the calling cry uttered by one of the highest-ranking operations' officers in the command structure of the HFC to another officer on the firegrounds. On another occasion, during a mobilization a lower-ranking officer on some firegrounds replied as follows to the control dispatcher who radioed him in order to request whether the presence of a higher-ranking officer was necessary: "He'd better; that is what he is getting paid for."[120] In the first case, the highest-ranking officer was not reprimanded for his inappropriate cry whereas, in the second case, the lower-ranking employee was formally reprimanded for having replied in a dismissive manner with regard to a higher-ranking employee. Third, fire-fighting personnel may use formal language during the front-stage communication and informal language during the backstage communication. In this case, the informal network, created by the background interactions, undermines or supersedes the formal rationality (Bourdieu 1999). Moreover, the boundaries of the roles undertaken by the various actors are often unclear. In the HFC, a dispatcher's role is often undertaken by officers, when the control personnel contact the higher-ranking officers on-scene.

Finally, the command structure and the formal procedures raise obstacles to the decision-making process in the case of emergencies where the existing protocols do not suffice to deal with their unanticipated parameters. Often, inadequate formal procedures interfere with the *ad hoc* effective management of emergencies. For example, the 9/11 Commission report details the deposition of the deputy fire safety director in the South Tower who was in communication with his North Tower counterpart. The South Tower director said that he would not order an evacuation procedure until he heard "from the boss, from the fire department or somebody" (Kean et al. 2004: 287). The '*should be*' prevailed over the '*must be*' confirming what Hannah Arendt (in Lukes 1986: 61) asserted: "bureaucracy or the rule of an intricate system of bureaus [is a formidable form of dominion] in which no men, neither one nor the best neither the few nor the many can be held responsible and which could be properly called rule by Nobody." The mechanistic organization interfered with what could have been a more effective approach to the management of the crisis (Schneider 1992).

[119] Fieldnotes, May 2006.
[120] Fieldnotes, March-April 2009.

Power issues emerge from the examples provided above. The higher-ranking officer cried out over the radio and was not reprimanded whereas the lower-ranking employee was officially reprimanded and, furthermore, his case was communicated to all organization-members via a fax explaining the circumstances surrounding his punishment.[121] The fax then became a symbol of power amongst the status-occupants, legitimizing the authority of the higher-ranking personnel over the lower-ranking employees. While Merton (1965) suggests that the distribution of power not so much between the status-occupants but between the members of the role-set generates those disturbances that prevent organizations from operating at considerably less than full-efficiency (Merton 1965: 380), the *division-set* indicates differently.

I have argued in the introductory chapter and chapter 3 that Merton's theory may be applied to inter-organizational communication. The outcome of this application is Thompson's (1967) *organization-set*. Thompson's approach refers to the role each first-responder organization undertakes during emergency responses. Both the HFC and the LFB assume a protagonist role in operations. The police as well as the ambulance service do not interfere with the fire services' tasks. In a major disaster in the UK, the BFRSs assume a secondary role in the management of the crisis, with the police being the coordinator of the responder-organizations involved.

However, between Merton's microscopic and Thompson's macroscopic approach there is an intermediate approach – that I name *division-set* – that allows us to examine the relations between the different divisions of the same organization involved in the emergency response. These divisions occupy a different status in the organization but employ personnel with very similar – if not the same – role description. In the preceding chapters I examined the communicative interactions primarily amongst two divisions of the fire services: those *virtually* related to the emergency response CCC and those *actually* involved in the response operations' units.

The most substantive similarity between the different FRSs is the double setting: the set-*virtual* and the dynamic-*actual* incident-scene. In the HFC, the BFRSs and the LFB, the

[121] Fieldnotes, April 2009.

CCC is the set-*virtual* scene where their control-employees perform similar tasks. The role of the control personnel is to receive the incident information. The latter is the input that stimulates the reaction of the organization with regard to an emerging incident (figure 5). The control personnel engage in a significant decision-making process: they assess the incoming information so as to instigate the respective mobilization protocols. In essence, control personnel convert the incoming incident information into organizational information. Organizational information – the type and the number of appliances and the personnel responding to an emergency – is the reaction, or the output, of the organization to the incident information as the external stimulus, where the dynamic-*actual* scene is set. This conversion from one type of information to another is constant and continuous. As soon as the operations' units are on the firegrounds, they attain more incident information which they convert to organizational information when they request additional or fewer resources than the ones mobilized on-scene.

The problem with coordinating the actions of the organization-members on both scenes at the same time is that two sets of expectations are created within the same role-set: one set by the control employees; the other by the operations' personnel. That happens because control employees deal with emergencies not in the background, but on another scene, away from the incident-grounds and, thus, are spatially distanced from what actually takes place during, for example, fire-fighting operations in industrial premises. Whereas in the control room fire-fighters are expected to answer telephone calls and forward any incoming information to dispatchers, officers or superintendents, on-scene they are expected to install the lines and extinguish the fire. The nature of their tasks differs. From a secondary task on the *virtual* scene they are expected to perform the primary task of the FRSs on the *actual* scene. On the *virtual* scene, expectations are set intra-organizationally, according to procedures. On the *actual* scene, extra-organizational factors such as the unanticipated parameters of the emergencies, other first-responders operating on-scene, and the presence of civilians or the media (Castells 2007) weigh on the organization-members involved in the response.

The BFRSs have another particularity. Next to the *virtual* and *actual* scene, there is a third stage that emerges in the *division-set*: the administrative personnel. Depending on whether they are uniformed or non-uniformed personnel, the actors performing on this stage may or may not be directly involved in emergency responses. If they are uniformed,

usually high-ranking officers, they act as incident commanders and do not deal with routine or set events. If they are non-uniformed, they may introduce regulations but they are not directly engaged in emergency responses. This stage came dynamically to the fore when the rank system gave way to the role system. Depending on the position they occupied in the reformed organization and regardless of their rank, personnel formed what could be defined as "coalitions of power" (Merton 1965: 373): operations' personnel vs. administrative personnel as well as another, broader, "coalition of power" between uniformed personnel vs. non-uniformed personnel.

As far as the first coalition is concerned, there were two fronts of players introduced: group A and group B. Group A, the administrators or managers (that is, higher-ranking uniformed or non-uniformed personnel), were perceived by group B, the operations' personnel, as active participants in the reform process. This older conflict between "station officers and the watches they command [whose] are systematically isolated from – indeed in some respects, almost opposed to – higher levels of management" (Salaman 1986: 48) and the higher levels of administration was re-introduced instead of being smoothed over. Group A agents perceived themselves not as active participants in the reformation process, but as those who by virtue of their position in the administration implemented the changes introduced. Characteristically, one higher-ranking employee maintained that the "auditing regime" that would define the financial support provided to FRSs forced them into implementing the new measures as quickly as possible:

> We are no longer giving you the choice; we are telling you and we will audit you, measure you […] The ultimate punishment would be to cut the funding to the local authority […] The auditors said that if the fire service did not modernize, the fire-fighters would not get the next stage of payment, regardless of who fault that [the "non-*modernization*"] was.[122] (….)

In contrast, group B considered itself as being subjected to a process that directly involved its members. However, group B members were not formally invited as active participants in *modernizing* the BFRSs. Essentially, operations' personnel felt that they were left out of the game and this imbalance in the distribution of power amongst BFRSs employees

[122] Senior fire-officer, pers. comm., 1 December 2006.

provoked a "lot of bad feelings"[123] between group A and group B agents. Their resentment became obvious as their performance was audited during debriefs held after emergency responses had taken place:

> Whenever we [the administrators] ask why we did this or that [...] there is an invisible war: 'you are managers, we are workers; we do not like you challenging what we've done […] because we don't trust you; we think you don't trust us'.[124]

Whichever were the changes that took place and however significant they were, personnel was unwittingly provided with an excuse to, as Burns and Stalker (1961: 140) eloquently put it, "find relief in attributing the difficulties to the wrong-headedness, stupidity or delinquency of the others with whom they had to deal or more mildly to irreconcilable differences in attitude and codes of rational conduct." This summarises what one of the senior fire-officers of a BFRSs said:

> I have a bit of a philosophy […] people, when bored, tend to find small things to become important […] if we are able to use their time in training session, fill their day […] When I was fire-fighter the day went faster […] People don't mind working harder doing risky things, but when you get to the dull day to day environment.[125]

Hence, what happened is that not all personnel were gradually introduced to the parameters of the modernized regime. Their conflict(s) occurred on pretexts rather than meaningful antitheses between the various actors of the same organizations. Group B agents agreed that even when being debriefed by members of group A, who evaluated their operational performance, they never told them "how to do the job, no."[126]

The second "coalition of power" was formed between two slightly differently populated groups: uniformed vs. non-uniformed personnel. Two problematic issues appeared to emerge from this antithesis. Uniformed personnel are employees who enter the

[123] BFRSs employees, pers. comm., December 2006 – June 2007.
[124] Senior fire-officer, pers. comm., 1 December 2006.
[125] Pers. comm., 29 November 2006.
[126] Operations fire-officer, pers. comm., 2 December 2006.

organization as fire-fighters having received the necessary operational training. The non-uniformed employees are generally specialized personnel that occupy positions in the administration and in some cases; they occupy the highest position in the organization. The problematic areas related to the fact that these key-positions in the administration of the organization were reserved for the fire-fighting personnel when they had reached a certain rank. For example, the position of the chief or the deputy officer of a fire-fighting organization was predominantly occupied by a male individual after having achieved a certain status in the organization.

However, these sudden changes endorsed an underlying process that had already begun. For example, positions concerning the financial conduct of the FRSs would no longer be filled by fire-fighters who happened to know how to deal with these issues by virtue of having managed them over a long period of time. The new regime called for specialization and therefore supported and accelerated the changes introduced towards this end of employing specialized civilian personnel for specialized tasks. Nonetheless, this meant that uniformed personnel, fire-fighters who were expecting to upgrade their status within the organization, were not provided with this opportunity. What further appeared to aggravate the relationship between the civilians and the fire-fighting personnel is the fact that non-uniformed personnel were appointed in positions created by the *modernization* agenda (Fitzgerald and Stirling 1999; Pyper 2003). Therefore, they became empowered players in the group A – group B game.

Interestingly a third coalition emerged as in the past there was an underlying conflict between control personnel who were not either employed as fire-fighters or considered by operational fire-fighters as colleagues and fire-fighters. After the 2004 Fire Service Act, control personnel were wearing the same uniform as the fire-fighting personnel and formed a closer relationship with their former "opponents."[127] These groups "vary in amounts of organizational power". Therefore, they also vary "in their capacity to impose their view of the nature of the organization" (Salaman 1980: 244; Brandsen and van Hout 2006). Thus, the conflict amongst organization-members with different roles and statuses is inevitably perpetuated on the complex stage of organizational action.

[127] Control employee, pers. comm., 12 April 2007.

8.3. From the expectations of the role-set to the demands of the system

What type of organizations are we dealing with? Table 16 provides a categorization of the principle parameters in managing emergencies as they emerged from investigating the 9/11 emergency response, the Greek episodes, the BFRSs and the LFB experience. The comparison between the HFC, the BFRSs and the LFB reveals that there are differences emerging from the role- and the rank-structure. The rank-structure refers to mechanistic systems whereas the role-structure represents an organic operation of organizations.

In the introductory chapter I proposed the following classification of the incidents to which the fire and rescue organizations respond: emergencies, routine and set events. In theory, emergencies are best dealt with by organic systems that operate under the expectation of uncertainty, with a view to resolving and surviving the emergency (Robert and Lajtha 2002). Routine- and set-events are anticipated. They do not erupt, they occur. For these expected events with anticipated parameters, adequate planning may be effectively provided by mechanistic systems. However, this mix does not always come out right. The 9/11 episode indicated that the existing procedures had not anticipated the intensity of the crisis. Therefore, they could not respond to the needs created by the unanticipated incident. When the deputy fire safety director of the South Tower said that he would not order an evacuation procedure until he heard "from the boss, from the fire department or somebody" (Kean et al. 2004: 287), he allowed the routines of a mechanistic system to interfere with a more effective approach to encountering the crisis that an organic system could have dealt with. The testimony of one of the civilians who managed to evacuate the building that morning indicated how the mechanistic system collided with an organic approach in the crisis due to the existence of very few protocols defining the action of the first-responder organizations and the fact that the first-responder deliberated avoided assuming responsibility (Kean et al. 2004). So, the information the civilian intended to communicate went from one employee to another and consequently took a longer time to reach *a* destination, rather than its "final" destination, because the existing procedures, at the time, did not indicate who would be the recipient.

Table 36 – FRSs investigated and the 9/11 response: A comparative perspective of the communication conduct during emergency responses

Communication during emergency management	***9/11***	***HFC***	***BFRSs***	***LFB***
Congestion of emergency centres	Yes	Yes	Yes	Not challenged
Emergency protocols	Detailed protocols	General guidelines of action/ specific protocols for high risk areas	Detailed protocols for numerous types of incidents	Detailed protocols. LFB expects to be provided with changes by those who introduce them
Mobilization protocols	General guidelines	General guidelines	Specific protocols	Specific protocols
Information assessment	Inexistent protocols – indecisiveness – panic	Experience and instructions issued by the command structure	Specific parameters for assessing information	Specific parameters for assessing information
Information dissemination	Erroneous choice of technical channels	Selective choice of receivers	Unobstructed disseminations of information	Unobstructed dissemination of information
Evacuation protocols	Existent but not rehearsed	Existent in some cases but rarely rehearsed	Existent/ not often rehearsed	Existent/ not often rehearsed
Public information protocols	Non existent, random or contradicting advice	No such protocols. Few lists with 'do's and don'ts'	Some existent protocols	Not existent. General advice
Structural failures	Yes: e.g. emergencies lighting etc	Yes: e.g. hydrant network, road network	Yes: e.g. hydrant network, road network, SPRINKLER systems	Rarely. When such failures are detected the responsible parties are severely fined
Equipment Interoperability	No interoperability	Little interoperability. Familiarity as the key concept of interoperability	One of the principal goals. Achieved through protocols, liaison officers. Constant rehearsing also brings familiarity	Selective (e.g. with the police not the ambulance) and achieved through familiarity not between individuals but between tasks performed by the various organizations
Lack of equipment	Yes	Yes	Adequately equipped	Little
Radio frequencies	Lack of frequencies; lack of knowledge/ experience with	Lack of knowledge/ experience with regard to their use	Adequate spectrum and knowledge of its use. Often	Adequate spectrum and knowledge of its use. Often

	regard to their use		lack of repeaters in areas (e.g. tunnels) where the signal is weak or inexistent	lack of repeaters in areas (e.g. tunnels) where the signal is weak or inexistent
Communication	Pyramid command structure	Pyramid command structure	Team management	Team management
Contradicting or unverified information	Yes	Yes	Little	Little
Inter-organizational cooperation				
ICS	Existent. Practiced according to the extent of the crisis and the familiarity of those who participate	Existent. Rarely rehearsed or practiced	Well rehearsed. Not always well practiced.	Well rehearsed on a local level
Actors and roles	Defined but not always respected depending on the participant actors	Defined but not always respected depending on the participant actors	Clearly defined	Clearly defined
Allocation of command structure	Near the incident-grounds	On the incident-grounds	Near the incident-grounds	On the incident- grounds
Allocation of resources				
On-duty	Problematic: management, self-dispatching (results in fatigue and lack of relieves) or unfamiliarity with the affected area/ premises	Problematic: management, self-dispatching (results in fatigue and lack of relieves) or unfamiliarity with the affected area/ premises	Occasionally problematic: management, self-dispatching (results in fatigue and lack of relieves) or unfamiliarity with the affected area/ premises	Occasionally problematic: management, unfamiliarity with the affected area/ premises
Off-duty				

Organizations struggle to maintain or improve their ability to deal with these events. There is often confusion surrounding how organizations should adapt their *modus operandi* so as to cope with their tasks. In order to manage the increasing complexity of emergencies, organizations must decide whether they prefer flexibility to an extremely high level of regulation. It appears that FRSs favour over-elaborate mechanistic systems to organic ones, due to the fact that overregulation determines the actions of organization-members and minimizes unexpected behaviours and reactions on-site. During August 2007, a senior LFB officer undertook the task of investigating whether more detailed and standard procedures would enhance the performance of organization-members during emergency responses. Currently, the LFB is in the process of debating whether the recommendations that resulted from the experimentations during emergency responses will replace the old general guidelines of action.

Similarly, the BFRSs have adopted detailed regulations in order to cope with emergencies. The BFRSs personnel perceive resilience as the "the capacity to cope with unanticipated dangers after they became manifest, learning to bounce back" (Wildavsky 1988: 16; Hills 2000). Thus, they have used past experiences to lay out detailed emergency plans and mobilization procedures so as to, first, make an effort to change the unanticipated character of emergencies to potentially predictable events and, second, to create a cost-effective distribution of limited organizational resources. Their initial mobilization procedures are based on the description provided by civilians, which in turn control personnel match to the parameters of the emergency plans registered in their computer systems.

According to the typology that Burns and Stalker proposed (1961; table 17) the HFC appears to be a mechanistic organization as compared to the BFRSs and – to a lesser extent – the LFB, which tend to acquire more organic than mechanistic characteristics. However, what becomes evident from table 17 is that FRSs are neither the one type nor the other. Some of the characteristics mentioned in the Burns and Stalker typology, such as the prescribed roles and the formalized modes of communication, may determine the character of the services more decisively than others. The BFRSs, for example, are seemingly organic systems. However their precise and prescribed communications practices prior to and during emergency responses (tables 19 and 20), the use of *free-speech*, the coded or verbal detailed reports, the status codes, and the extent of the detailed SOP indicate that they tend to regulate highly their operating procedures, a characteristic that defines an

elaborate mechanistic organization. During one of the conversations I conducted in May 2007 with a control officer in the EFRS1, he commented:

> […] We are having our medicals today, you see. […] A lot of people suffer from stress in the control […]. The fact is that we have to remember a lot more than we used to when I joined, years ago. For example, if somebody called [to open] a locked door 30 years ago, it meant that they were collapsed because they were old […] today you've got to consider if there is some kind of gas that it is released, is it domestic gas (?) is it carbon monoxide from the boiler (?) or something more sinister (?); if it is one person we deal with it one way; if there are three or four or more you deal with it in other ways; we take different steps […].

Before this conversation took place, I did not realize how these numerous procedures could affect the system other than improving the effectiveness of the BFRSs. However, the *Independent Review* as well as the 2004 *Act* referred to an organic change of the BFRSs that would replace the existent mechanistic organizational structures. According to the *modernization* agenda (*FRSs Act* 2004), an effort was made to clarify the purpose of the British services and generate a "culture which fosters organic change" (Bain et al. 2002: iv). In this context, the government thought it necessary to adopt national standards as far as the operational and administrative tasks were concerned, so as to create the basis for interoperability. According to the Independent Committee's report: "The new arrangements for the Fire Service need to achieve at least the following two objectives: first, a clear articulation of roles so that each body, committee or institution has a clear relationship to the others, a well-defined responsibility for delivering particular aspects of reform, and accountability for its performance; and second, an organic change process which allows ideas and developments to occur at any time without the need for even minor details to be agreed centrally" (Bain et al. 2002: 57) as "the mechanistic approach […] failed to fill the policy vacuum" (Bain et al. 2002: 46).

However, the typology suggested by Burns and Stalker does not coincide with the definition of the "organic" as mentioned in the *Bain Report*. The definition of the "organic" in the report that shaped the rationale of the 2004 Act that followed approximately two years later is the overcoming of the "archaic regulations which prevent employers doing more than making marginal or local changes" (Bain et al. 2002: 46) and

Table 47: Mechanistic and organic characteristics of the FRSs

Mechanistic System	**HFC**	**BFRS**	**LFB**	**Organic System**	**HFC**	**BFRS**	**LFB**
Hierarchical command structure	Y	-	Y	Stratification based on seniority and expertise or "best authority" (1961: 122), that is the most informed and capable individuals. They are appointed by consensus.	-	Y	-
Specialization	-	Y	Y	Knowledge/ experience	C	C	C
functionally isolated (self-contained action)	Y	C	Y	functionally collective	-	C	C
Formalization	Y	Y	Y	de-formalization [the "chronically anxious quest for knowledge" (1961: 122)]	-	-	-
Low commitment (loyalty/ obedience enforced)	Y	-	-	High commitment (cultural consensus)	-	Y	Y
Action by instructions/ orders	Y	C	Y	Action based on information and advice	-	C	Y
Importance and prestige (status) attached to internal and not cosmopolitan knowledge/ experience/ skill.	Y	C	C	Importance and prestige (status) attached to affiliations and expertise deriving from the industrial/ technical and commercial milieu external to the firm.	-	C	Y
Omniscience of the higher-raking/ static and prescribed roles/ status/ formalized modes of communication.	Y	Y	C	Collective decision-making/ dynamic and negotiated roles and status/ non-formalized modes of communication.	-	C	C
Importance of technical means rather than organizations' ends.	Y	-	-	Focus on the ends. Technical means to achieve the ends.	-	Y	Y
Y: affirmative/ the characteristic applies **(C): contested/ the characteristic is detected in the function of the organization but it does not apply as such** **(-): negative/ the characteristic does not apply**							

the replacement of the quasi-militaristic hierarchical structure by a stratification based on seniority and expertise or, in other words, "best authority" (Burns and Stalker 1961: 122). According to the "best authority" principle, the most informed and capable individuals are appointed by consensus. This, in the BFRSs, is thought to be achieved through the transition from rank to role. These parameters alone cannot establish the turning from a mechanistic to an organic system. Evidence is provided during emergency communication to support the view that the transition from a mechanistic to an organic system is incomplete. The large number of procedures, the careful selection of the very detailed mobilization protocols, the thorough stratification of the ICS, and the meticulous definition of the roles undertaken by the various actors engaged in the emergency responses and finally the non-*free-speech* policy and the coded reports result in a mechanistic organization.

In the BFRSs, the stratification is based on expertise rather than seniority in the service. So, the change from rank to role was introduced as a way to replace the quasi-militaristic command structure with a more flexible structure, where seniority gives way to expertise. That is the reason why the FRSs are no longer addressed as brigades. In the aforementioned context, orders are replaced by advice. The advice, according to the BFRSs personnel interviewed, is given by the higher to the lower-ranking personnel and vice versa, "whereas in the past the fire-fighters were executing the orders given by their superior officers". Nonetheless, the interviewees also argued that during an emergency there may be very little time to contemplate the mode of intervention. Therefore the senior officer on-scene decides and the fire-fighters follow his/her advice. This indicates that it is the enunciation that changes rather than the process itself. Moreover, the existence and systematic rehearsal of the scenarios contradicts the *collective decision-making* parameter of an organic system. "The scenarios are so well rehearsed that the fire-fighters do not need to be told how to do their jobs."[201] This quotation indicates, first, that there are scenarios, emergency plans, drafted by a higher authority of officers that are executed rather than negotiated on the incident-grounds. Any readjustment the operations' units need to make is decided by the officer in charge of the emergency response. Second, these plans are rehearsed. So, the orders, the instructions and the assessment of the personnel's performance are provided before the emergency response takes place. Each member of the group of fire-fighters participating in an emergency response assumes a different role on

[201] British senior fire-officer, 11 May 2007.

the incident-grounds. This role is predetermined. It is neither negotiable, nor collective or functionally isolated. It is part of a well-orchestrated dramaturgy where each performs a role that affects the role that a co-actor undertakes. Each BFRS employee is assigned "specific bits of the total task, which is split up according to traditional or rational principles of the division of labour, and according to the technological equipment available" (Burns and Stalker 1961: 97). The officers in charge do not appear to be omniscient as its leading protagonist.

The HFC, on the other hand, appears as a highly mechanistic system. In the HFC, operating procedures and modes of communication are not formalized and roles are neither distinct nor clear. The control personnel, for example, make the initial decisions with regard to the mobilization of the organizational resources based on: first, the few unofficial *Memorandums of Action*; second, the few, vague official guidelines. For example, the Service Order that refers to the communication procedures during emergency responses simply reads: "Dispatchers should address the operations' personnel with courtesy"[202]. Finally, control personnel make a decision based on the information provided by the callers, usually civilians or the police. So, the role of the CCC is dynamically defined by the parameters of the emergency: the perception of those who experience the incident (e.g. civilians); the assessment of the control personnel based on their experience, i.e. the tacit knowledge accumulated over the years; and the assessment of the operations' personnel, once they are on the incident-grounds. Thus, the mobilization is widely instigated and sustained by the judgment of the personnel involved and the instructions provided by the command structure rather than preset procedures.

Moreover, the HFC has another distinctive characteristic: informal networks often re-define the requirements of the formal organization either prior to, during or after emergencies. Two picturesque examples depict how informal networks affect these practices. In the early 1990s a political decision was made to introduce female employees in the workforce of the HFC. The head of the legal department at the time introduced legislation favourable towards women with regard to the conditions of their employment. No more than a decade later, the new head of the legal department tried to abrogate this legislation. In the new re-draft he put forward, he suggested that female officers should be

[202] Eggeklios (Service Order) 3, Regulations for Conducting Radio Communication, 15699, Φ.605.9, 13/05/88.

restricted to conducting administration and not operational work so as to prevent female employees from being promoted to higher ranks. Although his proposal was contrary to EU legislation with regard to equality in the workplace, the leadership of the HFC agreed to support the redrafted parts. It was, eventually, the effort made by some of the female employees of the HFC that contributed significantly to the rejection of the proposed amendments.[203] This example demonstrates that, first, organizational structures are constantly under negotiation and, second, negotiations depend on the idiosyncrasies of the negotiators. Informal networks, such as the high-ranking male employees allying to exclude the female personnel from being promoted, or the female employees allying to counter the male personnel's actions, penetrate and influence the formal structures.

Another unorthodox, yet not uncommon, *game* between formal and informal aspects of communicative interactions amongst organization-members occurred in one of the local fire services. In a Hellenic local fire station in the early 1990s, employees were forced to spend more than 48 hours per week in their working place, due to lack of personnel. However they maintained the right to log-in their overtime and either receive financial compensation or time off work. Nevertheless, in order to receive either of these two kinds of rewards, a behest had to be issued. Headquarters' financial services were unable to put forward such a behest due to lack of resources. Since the fire station's employees thought that such compensation would not be granted soon, they decided to play a game: whenever they reached 100 hours overtime they would end the counting and begin all over again. However, a couple of months after they had introduced the game, the long anticipated behest was issued. According to the behest, employees who had worked overtime would be financially compensated. But the gambling employees lost their bets. They were not allowed to re-log their overtime.[204]

Such *games* challenge the Weberian analysis according to which within the formal organization activities are regulated, distributed, and routinized on the basis of written documents (Weber 1947). In order to relieve their boredom, employees defied the formal structures of the organization. They made two false assumptions when initiating their *game*: first, that the formal organization would not fulfil its obligations towards the employees and thus the behest would not be signed; second, that even if it was signed, they

[203] Fieldnotes, April 2006.
[204] Fieldnotes, May 2006.

could reverse the parameters of the game. They would re-draft the log of the fire station and re-register their overtime. Past experiences had indicated that re-producing written documents was not an uncommon practice. Both assumptions made revealed that organization-members' behaviour is "inextricably linked with a historically specific social structure and culture" (Mouzelis 1978: 175). The HFC becomes more or less mechanistic depending on the individuals in the command structure.

As for the LFB, it has a hierarchical structure with highly specialized personnel. All personnel begin their service with similar expertise when they enter the LFB. Their relationship is highly formalized with prescribed roles and an effort to exclude the non-LFB personnel human element from the organizational conduct. For example, control personnel instigate the mobilization process based on a few descriptive procedures that apply to a range of incidents. These procedures are not as detailed as the mobilization protocol followed by the BFRSs. Action is based on instructions and orders. Yet because the fire service is task-oriented, the hierarchical structure is adopted towards achieving an effective end. And because it is task-oriented, the opinion of lower-ranking personnel may be sought by higher-ranking officers. The high commitment of the LFB personnel is achieved due to the strictness of the regulations. The personnel's status is more likely to be shaped by knowledge and expertise related to the organization. Nonetheless, expertise deriving from the industrial milieu is received, assessed and, when perceived necessary, adopted in the organizational conduct. The technical infrastructure is a means towards accomplishing the tasks set by the organization.

The practices followed in the various FRSs examined (table 18) indicate that the most significant difference between the HFC, the BFRSs and the LFB lies in the dialectic game: procedures vs. experience or formalization vs. dynamic adaptation. In the BFRSs and in the LFB, professional knowledge is made explicit through formalized procedures. In the HFC, the practice is to use the tacit knowledge deriving from experience. In the cases of the BFRSs and the LFB, the knowledge must be explicit in order to be acknowledged as the basis for legitimate action.

The BFRSs depend on the initial incoming information in order to search for the respective protocols of action. In this context, the services train the control operators first to develop a

friendly disposition and reassuring attitude towards those – usually civilians – who contact the CCC in order to announce an emergency and, second, to be able to promptly match the information provided with the protocols required. The intervention becomes ever more complex as the services adopt more detailed procedures with regard to responding to different situations in order to make the greater use of the available organizational resources.

Table 18

Emergency conduct in the FRSs		
HFC	**BFRSs**	**LFB**
1. General unofficial mobilization procedures. Vague Service Orders.	1. Detailed mobilization procedures.	1. General official mobilization procedures.
2. Procedures taken into account depending on the on-duty officers and the suggestions of the command structure.	2. Rigorous distribution of organizational resources based on procedures.	2. Procedures rigorously taken into account.
3. Incoming information and tacit knowledge defines the mobilization procedures.	3. Incoming information defines the implementation of the mobilization protocols drafted based on past experiences/risk assessments/cost-effective distribution of organizational resources.	3. Incoming information evaluated/ranked according to the source.
4. Control personnel are uniformed employees, i.e. operational fire-fighters.	4. Control personnel are non-uniformed employees trained to manage those who announce an emergency and the mobilization protocols.	4. Control personnel are uniformed employees, i.e. operational fire-fighters.

Both the HFC and the LFB employ uniformed personnel whom they train as fire-fighters without providing them with additional training as to how to communicate with civilians. The LFB treats its sources of initial incident information as automatic-alarm systems. The HFC tends neither to extract as many information as possible from the initial callers nor to verify incoming information when follow-up calls that announce the same incident are placed to the CCC.

For the BFRSs and the LFB, the mobilization procedures indicate that formalization leads to instrumentality. The HFC control personnel initiate the mobilization and forward incident information via interpersonal communication. Both the BFRSs and the LFB have substituted interpersonal communication with automatic notification systems, thus substituting the human mediators with automatic procedures as indicated in table 19.

Table 19

The process for dispatching operations' units on-site		
HFC	**BFRSs**	**LFB**
Control personnel either contact via telephone the station operators who in turn signal the operations' units in the fire-station or radio the standing-by operations' units providing the incident information orally.	Receive, register the incident information, signal electronically the fire-station, announce the incident information and fax over the registered information.	Receive, write down or register the information, signal the fire-station, announce and fax over the incident information.

Overall, within the FRSs investigated one can find examples of each of the bureaucratic types proposed by Gouldner: mock, representative and punishment-centred bureaucracy (see table 20). In most of the cases, it is the punishment-centred type of bureaucracy that dominates the organizational conduct. In the HFC, the BFRSs and the LFB the rules are imposed by an outside agency, the government, the local governments and the city hall respectively (mock). These rules are enforced by the ranking officers (punishment-centred) who issue directives via which they offer their interpretation of the rules issued by the outside agencies. FRSs personnel may oppose to these rules and regulations and ask the administration of the FRS to revoke them (representative). Rules and regulations can and often are intentionally (punishment-centred) or unintentionally (representative) violated both on and off the incident-grounds. This *rupture* between structure and agency produces overt or covert conflict between the higher and the lower-ranking officers (representative or punishment-centred), between the officers and the sub-officers (in the HFC and the LFB), and the administrative and the operations' personnel (in the BFRSs).

8.4. Summary

In short, communicative interactions during emergency responses are the outcome of the negotiations between the organizational structure and agency that are constant and continuous. These negotiations are in themselves a coping mechanism that reflects how internal *rupture*s (Lagadec 1993) interfere with how the organization-members react to external emergencies. Internal *rupture*s are predominantly caused by disruptions in the role-set (Merton 1965). The role-set defines the expectations the organization-members develop during their interactions. External emergencies are either incidents with unexpected parameters, routine or set events. The FRSs as predominantly mechanistic organizations (Burns and Stalker 1961) sustain and develop a bureaucratic system that tends to routinize emergencies by introducing an elaborate set of procedures. Emergency procedures are the result of organization-members' efforts to combine the available organizational resources with scenarios about potential emergencies. The more elaborate the procedures and the less the distance between the structure and the agency, the more effective the routinization of managing emergency, routine and set events. All these processes indicate that the fire and rescue organizations are communication events (Jablin et al. 1987; Pepper, 1995; Putnam, Phillips and Chapman 1996). As such, their structure is, to use a metaphor, under implicit or explicit siege by the actions of those who practice what the formal organization dictates as necessary in order to achieve its goals.

Table 20: Gouldner's typology of bureaucracies

Principle characteristics of bureaucracies		
Mock	**Representative**	**Punishment-centered**
Rules imposed by an outside agency. Thus rules are not enforced by management or obeyed by workers.	Rules are initiated by both strata, and both enforced by management and obeyed by workers.	Rules are enforced by either stratum and evaded by the other one.
Neither workers nor management can legitimate the rule	Both workers and management can legitimate the rule	Either workers or management can legitimate the rule
Little conflict between workers and management	Little overt conflict – few tensions between workers and management	Conflict between the two groups
Enforcement of rules: violates both workers' and management's interests	Enforcement of rules: violates neither workers' nor management's interests	Enforcement of rules: violates either of the groups' interests

Deviating from the rules: expression of uncontrollable human nature	Deviating from the rules expresses: ignorance or well-intentioned carelessness	Deviating from rules expresses: deliberate intent
Transgression of the rules is status-enhancing for both workers and management	Conforming to the rules is status-improving	Status-gains for one group are status losses for the other.

8.5. The dysfunction of the HFC bureaucracy: Reflections on a *puzzle* introduced

Unlike the bureaucratic character of the BFRSs and the LFB, the HFC is an amalgam of pre-bureaucratic ethos and bureaucratic principles. It is somewhere between the pre-bureaucratic ethos and the bureaucratic principles, the HFC organization fails to "correct its behavior by learning from its errors" (Crozier 1964: 187). Due to long-lived habitual practices, the organization seems to absorb its *errors* rather than reject or correct them.

The episodes examined indicate that the emergence of phenomena such as favoritism, patronage, and clientelism counter the bureaucratic principles of meritocracy, impartiality and impersonality. Such phenomena are incubated and sustained by a network of informal relationships amongst organization-members that overpower the formal interactions as indicated by the letter of the law. HFC employees prefer informal to formal activities (Sotiropoulos 2004), the informal activities being patterns of social interaction deviating from the formal organizational conduct.

It is evident that HFC employees develop the *quid pro quo* solidarity that allows operational or administration misconduct to remain unpunished. HFC fire-fighting personnel tolerate errors of judgment made during emergency responses. Trust in reciprocal tolerance becomes the ulterior motive of the organization-members. Thus reciprocity becomes the key element in sustaining the function of the informal routines and practices of the organization-members.

However, one may not assume that such trust is always the prerequisite for the practice of solidarity. Solidarity is sustained when the routine activities induce an acceptable degree of *error,* that is, in cases when *error* is contained within the organization. The solidarity breaks off when the *error* is unacceptable, that is, when it breaches the organization and enters the wider public sphere. Then those who fail "lose face" and are excluded.

Informal relationships result in transgression of roles. Roles are not practiced as defined by rules and regulations and, therefore, the line of authority becomes unclear and the status attributed to the employees that hold specific roles becomes vague. Such ambiguity affects the bureaucratic hierarchies by engendering, first, insecurity with regard to the status of the organization-members and, second, arbitrariness in distributing the power amongst the HFC employees, which breaches the agreed expectations of the bureaucratic system. It is often the case that when a high-ranking employee decides to punish a member of the lower-ranking personnel, the latter may be able to avoid punishment by requesting the mediation of a higher-ranking official: either an HFC employee or a politician. In such cases, power is essentially shifted from the high-ranking officer to the lower-ranking personnel. Hence, the status of the high-ranking officer who has by law the discretionary power to punish the lower-ranking personnel is diminished by personnel holding a lower status.

This whole puzzle appears to be forged on the political ethos of the Greek state that has an informal strength that exceeds the formal structure. The pre-bureaucratic ethos of the informal relationships was retained but the action of the HFC organization-members may be attributed to the socio-cultural and political *milieu* of the organization. It is the history of the organization that then fuels a discourse that attributes a specific clientelist network of meanings to the organization's routines and practices.

In 1832, the Administration of the newly formed Hellenic state attempted for the first time to create a public service that would mitigate emergencies, such as fires. From the moment of its conception in 1832, until 1931, when it assumed its current structure, the

Hellenic fire-fighting service underwent numerous changes that reflected the political instability of the Hellenic state (Mouzelis 1978; Charalambis 1989; Clogg 1999; Koliopoulos and Veremis 2002).

Most of the changes were nominal rather than substantial and encountered a number of recurring crises. These superficial changes were introduced by the Hellenic state each time a major fire incident occurred. Despite the state's intentions to form a system that would respond effectively to the increasing needs in fire-fighting, the representatives of the state merely reproduced the same structures of the first fire-fighting formations. The "political system" (Burns and Stalker 1961) of these cloned organizations bore similar characteristics. The Hellenic fire services employed people with common professional status: they all came from a military background, entered by defined channels of professional qualification, with common interests that developed during a usually prolonged military training and service. Every time they used similar equipment, scarcely adequate and rarely renewed. They operated according to rules and regulations similar to those introduced by the military and they administered according to clientelism and patronage, that is the selective promotion and distribution of privileges and rewards to certain individuals regardless of their qualifications (Perrow 1972; Charalambis 1989; Mouzelis 1978; Sotiropoulos 2004).

The patron – client relationships "were a typical form of organization in oligarchic parliamentary politics" that later on shifted "from oligarchic/ traditional" where the empowered notables and the military chieftains of the Greek revolution (Mouzelis 1978; Clogg 1999; Koliopoulos and Veremis 2002) gradually gave way "to state/ bureaucratic forms of patronage" and meritocratic criteria for distribution (Mouzelis 1985: 332-333). These institutional and formal procedures of the Greek state were new to the recently liberated Greeks (Charalambis 1989). On the other hand, in non - institutional informal relations, the role of powerful patrons, such as the landholders, are familiar. New concepts like: "state", "citizens", "institutionalized rights", laws", etc, are placed in an old, feudal, context of power distribution in a state that is making a fresh start. Such a state has no previous experience as to the ways a government acts when it is facilitating the centralized authorities and new modes of production that had already served as the basis for the growth of capitalism and a strong nation-state in many European countries earlier.

Thus on the whole, between 1830 and 1880, the "huge state apparatus [was] controlled by the crown and by a more or less fragmented political oligarchy at the head of extensive clientelistic networks". Until 1922, "the State apparatus and civil society [continued not to] operate so much in class as in clientelistic terms". Between 1922 and until the Greek Junta (1967 – 1974), "the political conflict, contrary to the previous pre-capitalist period, took a more direct class character. This does not mean of course that clientelism ceased to play an important role in Greek politics or that political parties lost entirely their personalistic character […]" (Mouzelis 1978: 17-27)

In the case of the HFC, the redefined patron-client relationship is manifested in the process of selecting the highest-ranking officials of the state institutions, such as the chief fire-officer of the fire and rescue service. It is essentially the political authority of the state that selects and appoints individuals in such positions. In turn, these individuals, select, appoint or decide the retirement of the higher-ranking organization-members. It appears appropriate to conclude these reflections with a remark made by Nicos Mouzelis when he argued that "*modernization* does not eliminate clientelism; patronage networks tend to persist, albeit in a modified, less traditional form, even after the decline of oligarchic politics and the development of industrial capitalism" (1985: 332-333). I have aimed in this thesis to show that the documentary sources and the evidence from participant observation reveal that this persistence is true of the HFC, as well.

8.6. Afterward

This thesis has examined the structure of the FRSs and the communication conduct of their organization-members during emergency responses. I have used case studies to indicate the routines and communication practices of the FRSs personnel and have provided a chronicle of the 9/11 and the Katrina emergency responses as benchmarks, in order to illustrate the similarities and differences in the FRSs conduct.

Regardless of how elaborate their structure and function are, the FRSs always encounter problems during emergency responses. The human factor contributes to the emergence of the intra-organizational problems when dealing with external emergencies. The

bureaucratic structure sustains the effective administration of organizations and the practical aspect of the emergency management. This elaborate, but rigid, system of organizing conflicts with the human element and with the requirements of emergencies calls for improvisation. Improvisation is necessary to overcome problems which are bound to occur during a response.

A number of problems that affect the management of the FRSs have been included: the absence of a unified command and the consequent un-coordination of actions of first-responders; the insubordination and misinformation coming from the emergency services' dispatch centres which, in some cases, led responders or civilians to their death; the inadequacy of governmental policies and the insufficient technological support.

The absence of unified command and insubordination results from the disrespect for authority. Organization-members undermine the authority of those who acquire their status not by merit, experience or expertise, but by seniority, which does not necessarily imply experience. Moreover, the inadequacy of governmental policies is predominantly due to the fact that rules, regulations and procedures are designed on a strategic level by high-ranking officers with, or without, expertise and may be inter-FRSs loans that have not been well-adopted to the needs of the organizations. When high-ranking personnel design these rules, regulations and procedures, they consider the ideal function of the organization, but often fail to indicate how these can apply so as to avoid frictions among the organization-members in different departments of the same organization or the various FRSs on a European level. Essentially, the designers fail to understand the different 'idiosyncrasies' of the various organizations. For example, the administration of many of the European FRSs saw the development of the ICS and the mutual aid protocols as the desired solution (Duke 2002) to the problems displayed by the fire and rescue organizations. However, the solution to these issues does not primarily lie in adopting the same or similar protocols.

The reason why common protocols may not be as effective on a tactical or operational level as expected on a strategic level is also due to the cultural differences of the various fire and rescue organizations. European services should take into account the human factor as empirical evidence indicates that some organizations may appear to fail to learn (Lagadec 1993), others refuse to learn (Perrow 1999), others learn only in symbolic ways

(Clarke 1999; Borodzicz and Van Haperen 2002) while many learn slowly (Boin 2005; Lintonen 2004). In the HFC, for example, organization-members would probably find ways to overcome regulations that would not suit their routines and practices developed and sustained over a long period of time. The initial step toward addressing these problems is to understand the variety of the *modus operandi* of the various fire services – the "cultural identity" (Falkheimer and Heide 2006) of these organizations – to realize that expectations differ to comprehend the reason why they differ, to take some time to explain to FRSs personnel why certain processes should exist and what are the stakes in case these procedures are not followed. This is an anti-mechanistic and time-consuming process, but explicit explanations with regard to how organization-members should act under certain circumstances may eventually lead to the creation of a new tacit knowledge that will gradually replace the existing one and, thus, facilitate the *learning process* (Lane and Lubatkin 1998). Thus, organizational boundaries may be allowed to become more permeable and invite collaboration (Ailon-Souday and Kunda 2003; Dahles and van Hees 2004) compared to the ambitious aims which the bureaucracy of the European Union defines for cross-border collaboration.

To work towards more effective policies on both the European and the national level, "pre-existing plans, structures and arrangements for bringing together the efforts" of various agencies (Johnston 2003), as well as training and emergency planning must be addressed on an international level (Dayton 2004; McConnell and Drennan 2006). Thus, planning has been suggested as the most viable solution. And yet, although *planning for crisis* is almost a contradiction in terms, and even though *contingency planning* is necessary but not sufficient (Boin and McConnell 2007) some level of planning the organizational conduct and organizing the dissemination of information is imperative because it can secure the effectiveness of communication during emergencies.

To this end, it is necessary that each organization frequently and regularly test their materials, equipment, information systems and their inter-dependent infrastructure. Working with communities, civilians, private owners and public organizations ensures that the inter-dependent infrastructure, such as bodies of volunteer fire-fighters or efficient hydrant or road networks, provide effective support to responding to emergency situations. But first and foremost, it is essential that organizations address the development of continuous-education programmes for their members by organizing seminars from experts

both from within the FRSs but also from industries, the government and other agents with whom they can co-operate. In order to diffuse such knowledge as effectively as possible, the creation of a personal development registry would help keep track of the training of each FRSs organization-member. This system for registering skills and competences may also enable a new reward structure, reconsider the promotion regulations by merit and not by seniority (Bain et al. 2002) and facilitate the circulation of the FRSs across services and countries. If such a change is to be introduced, the rank-structure will be inevitably redefined since the promotion and the rewards of the HFC personnel are, for the time being, based on seniority and *good practice* (Kostaras and Schuh 1990; Bain et al. 2002) may be achieved if those who perform are rewarded. However, the process may prove complicated, as criteria should be introduced and audits will be necessary to ensure the implementation of the process. Furthermore, FRSs should reconsider the value of volunteers as organizational resources. Volunteers may staff fire services in remote rural areas so to avoid dispersing the permanent employees from fire-stations that require more personnel than they employ. In order to give such responsibilities to the volunteers, it will be necessary to train them on a systematic basis. Moreover, planning, rehearsing and launching emergency responses are facilitated by up-to-date technologies. Such systems support the diffusion of the information and minimize the fragmentation of the decision-making process. On the level of prevention, cooperating with local and central governments may adequately resolve issues such as traffic and lack of water supplies.

This thesis is a comparative research project which has broken new empirical ground. It is a first effort to combine fieldnotes with recorded dialogues between operations' centres and intervention units during emergency operations. Further research is necessary to shed more light on the different aspects of the organizational conduct. One way to explore such conduct would be to examine the interactions between the various hierarchical positions of the organizations both on an intra-organizational level and on an inter-FRSs, European level, for example the interactions among control employees. Gender and minority issues must also be explored in the FRSs. With the Equal Opportunity Acts, the BFRSs have begun to come to terms with the recruitment of female and non-white fire-fighters (Salaman 1986: 35-54). However, in the HFC, the issue of female employees is inadequately addressed whereas the issue of minorities it is not addressed at all because there are no non-white or non-Greek employees. In the LFB, the issue of minorities is inadequately addressed and the issue of female employees is not addressed because the

Brigade has no female fire-fighting personnel. Another issue to examine would be the structural relationships between the FRSs and other first-responder organizations in a wider social context from a historical point of view. However, this thesis represents a first step in examining the structural relationships between the FRSs and other first-responder organizations in a wider social context than usual and has demonstrated the fruitfulness of such an approach both theoretically and practically.

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