Strategizing during an offshore race

What roles play human and non-human agents in ecological sensemaking?

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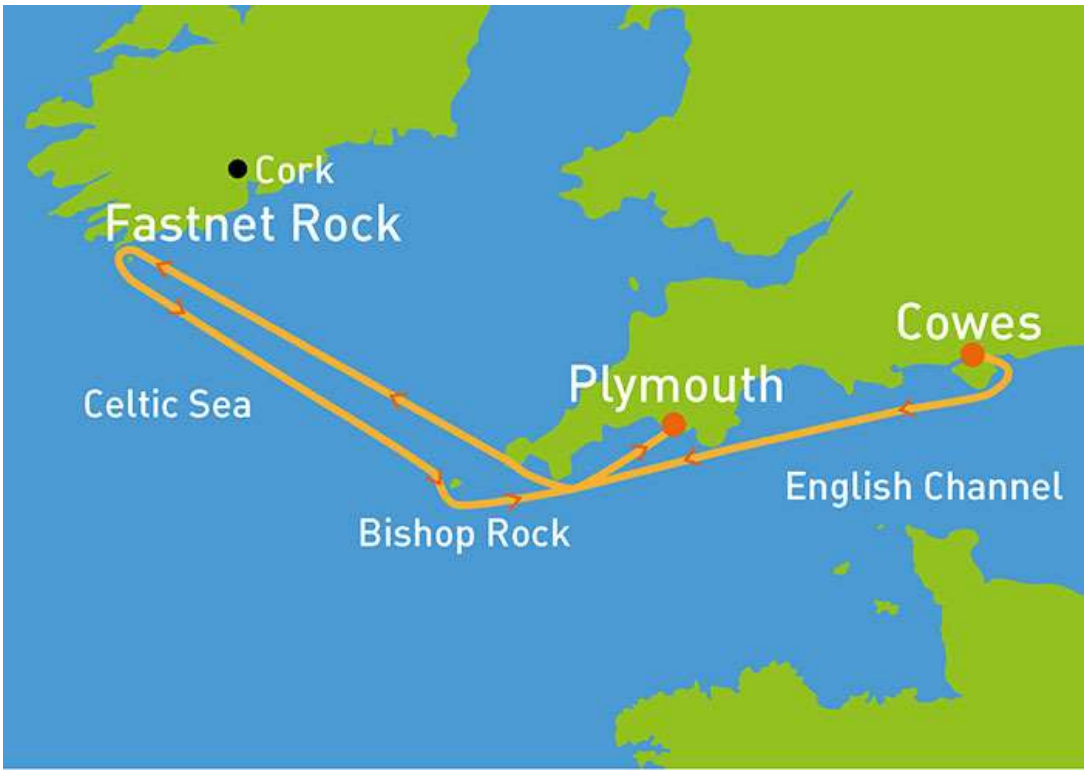
What roles play human and non-human agents in ecological sensemaking? An ethnography of sensemaking during an offshore race

"The Fastnet Race is a famous biennial offshore yacht race organised by the Royal Ocean Racing Club of the United Kingdom, named after the Fastnet Rock, which the race course rounds. Generally considered one of the classic offshore races, 'Fastnet' is a difficult contest testing both inshore and offshore skills, boat and crew preparation and speed potential." (https://en.wikipedia.org/wiki/Fastnet_Race)



http://www.rorc.org/events/racing-events-2017/rolex-fastnet-race

Ecological sensemaking has, to our current knowledge, been especially studied in crisis or dramatic situations: the Mann Gulch Disaster (Weick, 1993), the life in extreme conditions (Whiteman & Cooper, 2011), or the dramatic crash of flight AF447 (Berthod & Müller-Seitz, 2018). Whiteman and Cooper (Whiteman & Cooper, 2011 p.892) defines ecological sensemaking as how to make sense of, and to respond to, subtle cues in their natural environment". The current proposition aims at questioning ecological sensemaking in the context of the *Fastnet Race* taking place on offshore seas in an intensive but not critical situation of sailing competitions.

In particular, because of the increased importance of information systems (IS) on board of racing yachts, we would like to question the role of non-human agents in ecological sensemaking practices. Indeed, central to Whiteman and Cooper study of ecological sensemaking is the concept of ecological embeddedness: "An actor is said to be ecologically embedded within an ecosystem when he or she understands the local peculiarities and interactive effects - of terrain, climate, seasons, vegetations, and animals - and the impact of disturbances such as fire or an insect outbreak" (Whiteman & Cooper, 2011 p.892). They posit that "ecological embeddedness may enable ecological sensemaking for a variety of reasons: it may enhance the relevance of prior enacted environments, increase the opportunities for actors to bracket and interpret local topography and ecological processes over time (and thus expand their repertoire of skills) and facilitate learning through trial and error" (Whiteman & Cooper, 2011 p.892).

Sensemaking and materiality

Although previous research has shown the role of technology and materiality in sensemaking (more on this later), we would like to analyze how and what mediating roles IS – as non-human agents (Brummans, 2007) – play on the ecological embeddedness and as a consequence on the sensemaking of ecological cues especially in complex and volatile environment of offshore racing.

In so doing, this paper answers the call of Whiteman and Cooper to study the varying ways that human and non-human agents "socially mediate ecologically material conditions and the power relations inherent in these negotiations" (Whiteman & Cooper, 2011).

We are also in line with previous studies that criticize the anthropocentric view of sensemaking developed by Weick in his canonical research on sensemaking during the Mann Gulch Fire (Weick, 1993). Although these studies (Berthod & Müller-Seitz, 2018; Cornelissen et al., 2014; Hultin & Mähring, 2017; Whiteman & Cooper, 2011) consider sensemaking as a socio-material practice, these differ from one another in their approach of the discursive and the material entailment.

A first group of papers still considers sensemaking as a human activity. Yet, they posit that framing – "creating expectations about important aspects of the context or circumstance by directing individuals to elaborate on the default or prototypical scenario in a manner suggested by the frame" (Lakoff, 1987 cited by Cornelissen et al., 2014 p.701) – is actively influenced by materiality (Cornelissen et al., 2014; Whiteman & Cooper, 2011). In particular, both studies

show how material cues can, in highly pressurized context, lead to a contraction of meaning by individuals and, in turn, how individuals with different framings read material cues.

A second group of more recent papers considers sensemaking practices as "socio-material practices in which a multiplicity of agentic flows are at stake" (Introna, 2018 p.6). In these studies human agents are not anymore the locus of sensemaking practices (Berthod & Müller-Seitz, 2018; Hultin & Mähring, 2017). Instead, these studies consider sensemaking as a practice resulting from the imbrication of human and non-human agencies through time and space.

In their study of flight AF 447 crash, Berthod and Müller-Seitz emphasize that "the information system in the aircraft does more than producing data. It takes action and flies the airplane on its own, based on the computed data it has generated" (Berthod & Müller-Seitz, 2018 p.54). For them, the increasing level of automation of flight decks has tremendously enhanced reliability as the influence of human and organizational factors is reduced. Yet, it also increases pilots' dependency on IS to depicts reality and the environment. As the authors highlights, the sudden breach of the material and human imbrication when the IS gave the control to pilots created a cosmological episode. More, it seems that pilots got overwhelmed by the multiple informational cues and alarms given by the IS which were contradictory and defective. Coupled with a lack of leadership, this situation led to a dramatic and fatal outcome.

The paper of Hultin & Mähring (2017) discusses sensemaking practices in the context of an emergency ward. In particular, the authors question the role of IS (i.e. a screen giving information on the flow of patients in the ward) in the sensemaking practice. Yet, in their perspective, material artefacts are not sources or devices "supporting the human who consequently becomes enacted as the primary source of meaning. They are constitutive of the material-discursive practice conditioning the acts and enactments of sensible actions and beings [...] Sensemaking is a process, a movement, an iteration in material-discursive practices constituting the conditions of possibilities for subjects and objects to act in sensible ways" (Hultin & Mähring, 2017 p.587).

To develop this ontological view of sensemaking, Hutlin and Mähring draw on Barad's post-humanist view (Barad, 2003) and the concept of material-discursive practice: For Barad, materiality is not a separate or static entity, serving as a source of sustainability for discourse. Rather, by using the term material-discursive she emphasizes the entangled inseparability of discourse and materiality in the dynamics of intra-activity:

> "It is through specific intra-actions that a differential sense of being is enacted in the ongoing ebb and flow of agency. That is, it is through specific intra-actions that phenomena come to matter—in both senses

> of the word. The world is a dynamic process of intra-activity in the ongoing reconfiguring of locally determinate causal structures with determinate boundaries, properties, meanings, and patterns of marks on bodies" (Barad, 2003 p.817).

That is, the way "discourse and materiality are ontologically inseparable and thus, constituted through each other […] This ontological entanglement implies a view of agency as a temporal flow, always inheriting from previous practices (and imparting to subsequent practices), yet also always subject to the contingent possibilities of the present" (Hultin & Mähring, 2017 p.571). It is this flow that creates the temporal conditions to act as subjects and objects.

This view of agency as a temporal flow is very interesting as it emphasizes the processual constitution of sensemaking. This processual view is something that has been missing in current research adopting a CCO paradigm, in particular works developing an interactionist perspective. Yet, by considering discourse and materiality as inseparable entities that create the conditions for subjects and objects to act equals to consider these conditions as given without questioning how this entanglement of discourses and materiality is produced. Indeed, Hultin and Märhing (2017) highlight empirically very well how two different material-discursive configurations of the same objects and subjects are creating different contingent conditions to act. Yet, the authors do not clearly describe how these configurations come to occur (Plotnikof & Mumby, 2019).

In this paper, we draw on a relational ontology to study the way the material-discursive configuration gets constituted and transformed through intra-activity with what consequences on the subject and object possibilities to act or to be enacted. In a relational ontology communication is conceived as" the way by which various aspects of the world come to express themselves, more or less, in and through interaction" (Cooren, 2015 p.3). In particular, we would like to highlight how some non-human agents (IS) gain agency (Brummans, 2007) and authority (Koschmann et al., 2012) in the dynamics of intra-activity making other agents (ecological cues) matter less.

The ethnography of an offshore sailing race on Moa

We collected the empirical data during the Fastnet Race 2017. Our analysis is based on participatory-observation (Barley, 1990), the author (also a crew member) was equipped with a camera (go-pro) with which he managed to record discussions on board related to formal tactical decisions and also crews' informal talks about tactical decisions (Meunier & Vasquez, 2008). Texts and maps that were mobilized in discussions were also collected. We also wrote

daily notes over the salient events of the day. More, we were able to discuss and debrief over the race afterwards on our commuting back home.

Crew on board of Moa (a 50-feet long racing yacht, picture 1) is composed of 12 members split into three watches (table 1). Because the race is 24 hours/4 days race, each watch rotates every three hours from 'off-watch' (figure 2: resting in bunks inside the boat), to 'on-call' (outside on deck but not active unless help is needed), to 'on-watch' sailing the boat and taking tactical decisions (figure 3). Tactical and navigation decisions are taken by one person in each watch (tagged with a N as navigator including the owner of the boat: François).

Figure 1 : Moa in action

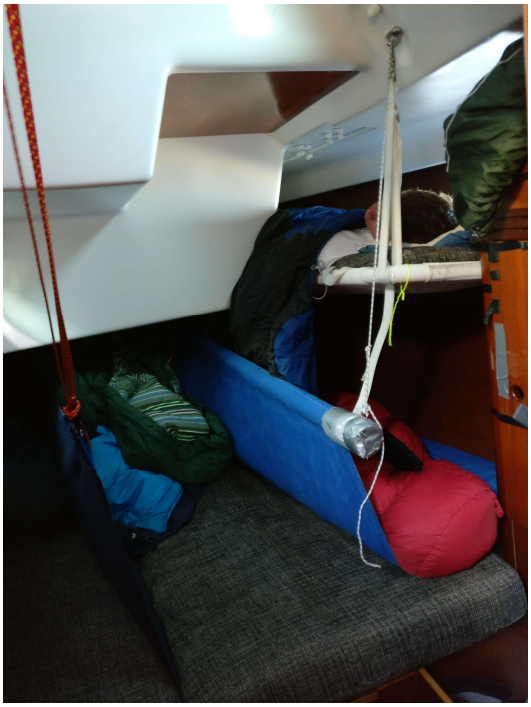


Figure 2 : buncks

Figure 3 : Moa during the Irish Sea crossing

Table 1 : watches composition

Watch A	Watch B	Watch C
Jeroen (N)	François (Owner)	Luc (N)
Mathieu (Skipper)	Yves	Thierry
Author	Philippe(N)	Stijn
Michèle	Boris	Hubert

Ecological embeddedness, crew experience and IS

Ecological materiality is defined as: the interaction of dynamic biological and biophysical processes and organic and inorganic matter over space and time (Whiteman & Cooper, 2011 p.892). In their comparative study, Whiteman and Cooper (2011) show how the complexity and the volatility of ecological cues influence the capabilities of actors to make sense. The context of offshore racing is particularly interesting to study the salience of ecological materiality to sense making processes. Indeed, offshore sailing by definition means sailing away from the shore in open seas. It implies, to deal with ecological elements such as the wind, tides and the related streams changes in strength and direction, but also other elements such as the topography of the land when getting close to shore. In addition to these ecological elements, offshore sailing implies, especially in the Channel, the North and Irish seas, to deal with the density of marine traffic related to the race itself and to the commercial and fisheries navigations.

Whiteman and Cooper also highlight how the level of expertise, of embeddedness in the environment enables actors to bracket ecological cues in order to make sense of the situation. The crew of Moa is very experienced. Everyone on board has already sailed offshore races. For some crew members, they were doing their 9th Fastnet race with excellent results in the previous editions. Moa finished 3r^{d} and 7th in the two previous editions and is considered an outsider in her category (IRC1). As we will see, due to a number of tactical mistakes, she will only finish 15 out of 57 in this race's edition.

Just as (Berthod & Müller-Seitz, 2018) pointed out in their paper, non-human agents, such as information systems (IS), are playing an important role in the practice of sailing a racing boat. Since 2000, onboard technologies and telecommunication devices have tremendously changed the rules of the game in offshore racing. For example, weather forecast can be received by a satellite phone (see Fritz's email in table 2). Weather forecast files are also automatically downloaded in the navigation systems (figure 4). Based on this information, the navigator can prospectively plan the route to follow in order to reach a certain mark of the course in the most rapid and efficient way. More the Automatic Identification System (AIS) allows to see all the boats in a zone of 1.5 miles around the boat. The system also indicates the name, the speed and the direction of each boat (see figure 5).

On board of Moa, there is a chart table corner with a central computer giving the position of the boat on a map (figure 4-5). Simulation algorithms can be used to see how the wind and streams evolve in time and place. Based on those simulations (among other tools), the tacticians can project themselves in the race and develop routing scenarios. The skipper also receives every 24 hours a weather briefing (Table 2) from a professional meteorologist called *Fritz* and owns a copy of a road book written by an experienced sailor Mr. Maes with a number of indications on the ideal route during the Fastnet. On deck, LCD screens (figure 6) give constant information on the wind direction and speed, boat speed and direction on the water and on the ground (the difference tell us about the effects of streams on the boat evolution), and the depth of water. Unlike the pilots in a plane (Berthod & Müller-Seitz, 2018), the crew members are not encapsulated from the environment. They are on deck 5 to 8 feet above the water (figures 1-3). They feel the wind, the temperature changes, the boat movements on the water as well as the waves when the weather gets rough and stormy. They see the sky, the clouds, the waves, etc. They also sense the environment differently during the night when the visibility is reduced to what we can see on the screens. Yet, as we will see in the following events, some ecological cues did not get considered.

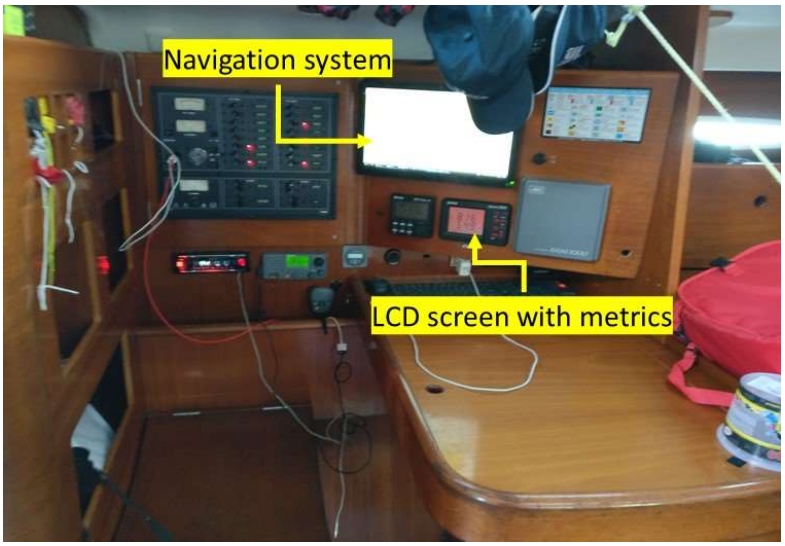


Figure 4 : Chart Table

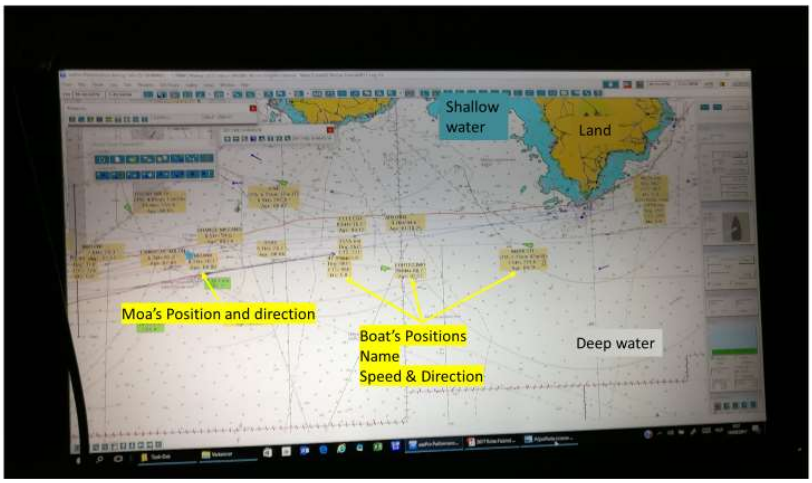


Figure 5 : Navigation system

Figure 6 : LCD Sreens

Building the NNW script authority through inter-agency

The following map (figure 7) illustrates the course of Moa during the race of 2017. During our data analysis[1], we identified two major episodes including multiple communicative events (Blaschke et al., 2012) where decisions where taken that contributed to the end result of Moa during this edition. In this paper, we will explain one which we call *the NNW script*.

On the 7th of August 21:35, Moa was south of Land's End and are heading upwind to the Ilse of Scilly, an archipelago at the end of Lizard peninsula. Looking at the map, one realizes that the archipelago is situated on our route to the Fastnet Rock. The wind at that time of the race was at the NW meaning that it is impossible for a sailing boat to go straight to the Rock. Indeed, it needs a certain angle between the wind and the boat to fill the sail with wind (min. 30° between the boat and the wind direction). Hence, when going upwind, one tries to make the highest speed and the less distance possible in order to reach the upwind mark (here the Fastnet Rock). The crew decided to go around the Isle of Scilly up North. A basic rule of sailing is to stay in the diamond zone as we schematize on figure 8. The difficulty is that the diamond (the zone where to sail updwind) moves depending on the wind direction. The expected diamond was NNW in green and corresponded to the forecast expecting the wind to turn to the NNW. The closest one sails to the borders of the diamond the smallest become her possibilities to stay into the diamond it if the wind changes to an unfavorable direction. On Tuesday 8 august 5PM, it is unfortunately what happened when Moa reached the layline NNW and tacked to head directly to the Fastnet Rock: the wind kept turning reaching a NNE direction, which was totally unexpected if we read Fritz's weather forecast. As a result, Moa was way outside the new diamond NNE (red). It implied for Moa to cover more distance than necessary and to lose ground on its direct competitors which stayed on southern routes to the Rock (left side on figure 8).

[1] The technical explanations and illustrations are similar to those found in (Hutchins, 1991).

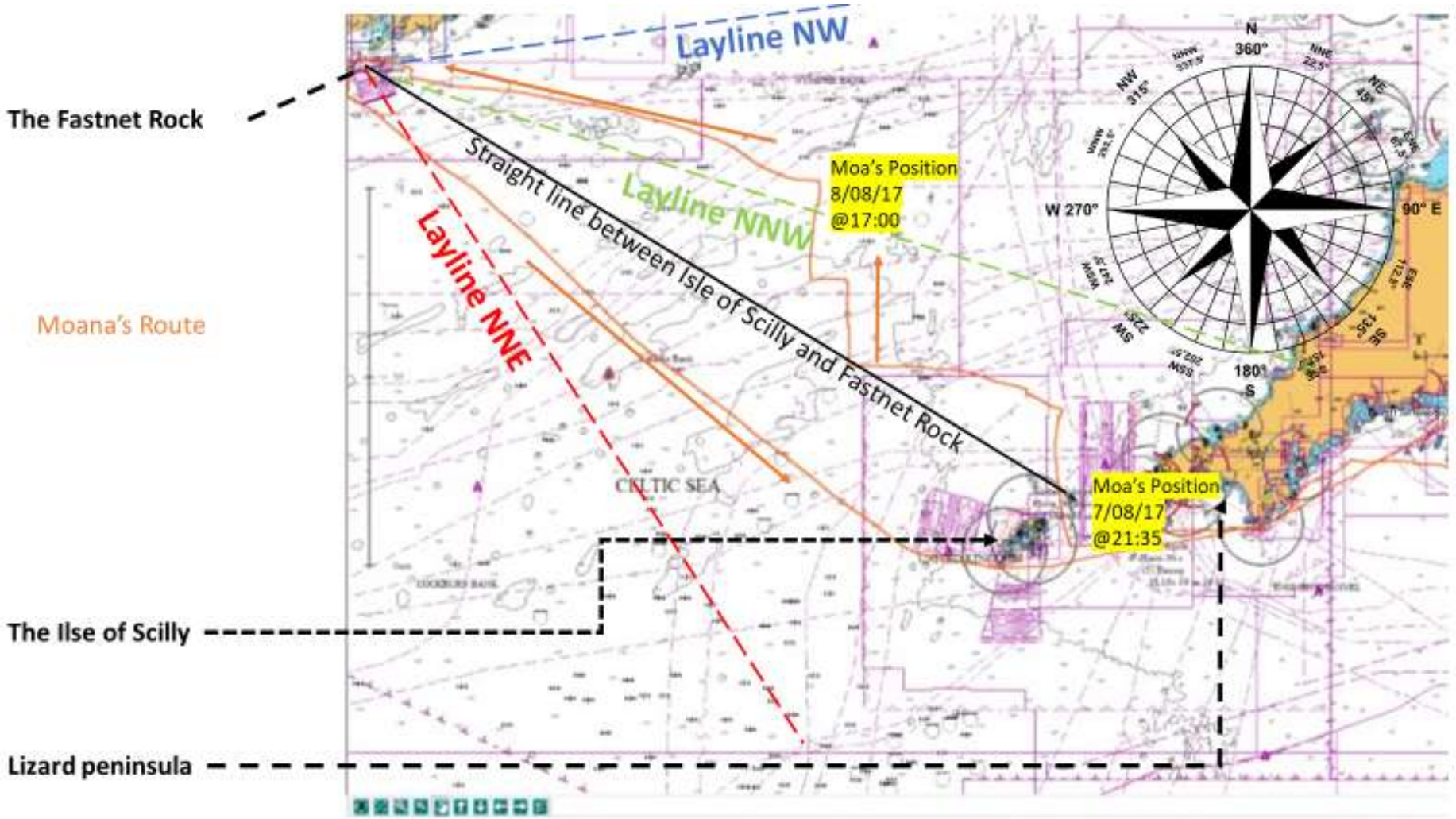


Figure 7: Mapping the events of the "NNW Script" Episode

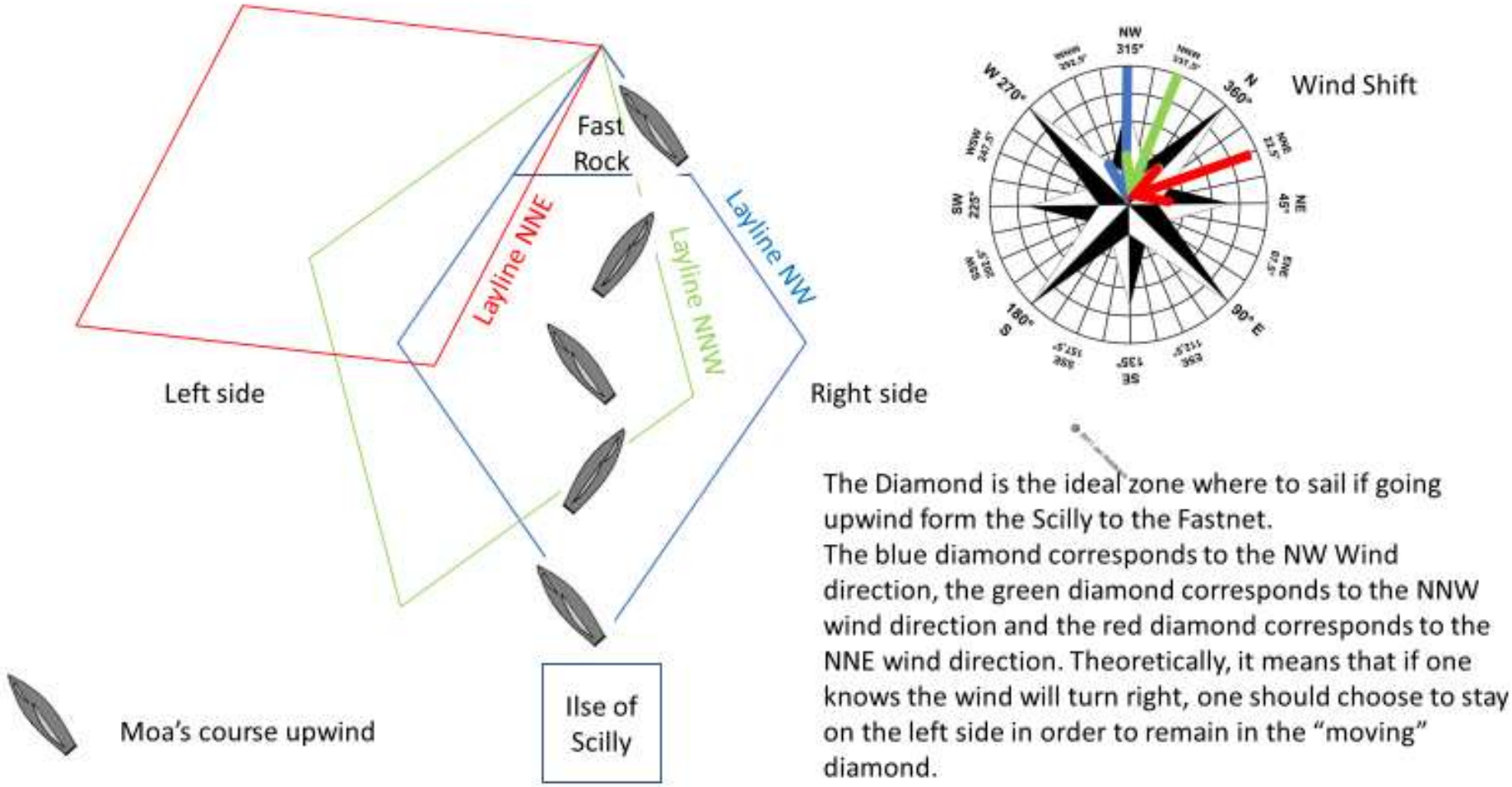


Figure 8 : Schematized story of the events

Intra-actions' analysis

When we analyze the conversations, we see that there is a clear reference to a script, a weather forecast in the email from Fritz, the team's weather advisor (see Table 2). Fritz considers that on Tuesday the wind will shift from NW to N-N-W and increase in strength by 15 to 20 knots. On Wednesday, the wind will remain N-N-W and drop in strength from 20 to 15 knots. Several excerpts show that in their speeches, the crew members mention this forecast (lines: 18,47,60,75-79, 94-95). To these discursive practices are added a series of interactions with non-human agents, such as those of Luc and François (lines 2-15) with the navigation system, the configuration of the LCD screens requested by Mathieu (lines 47-60) or those of Philippe with the simulation system running on his IPad (lines 83-87).

Thus, the actions taken by the crew to position Moa in the North in relation to the objective emerge as an enaction within the movement of actions. The speeches presentifying Fritz' text by the navigators and their actions of information system's visualisations condition the actions taken by Mathieu and the rest of the crew with regard to the physical positioning of the boat, its tuning, its speed, etc. It is therefore this material-discursive configuration that determines the position from which the crew in charge of maneuvering the boat considers these tactical decisions to be the most appropriate.

More, it is through these agential intra-actions that the script materializes and becomes authoritative. In doing so, the crew seems to be encapsulated or isolated from the direct environment, rendering invisible ecological clues such as the cold, the wind force or the blue sky, which therefore seem less significant, less material, in the agential flow. Although, afterwards, those were contradictory with the forecast.

In the second part of the episode, a new material-discursive configuration is formed. In this configuration, the NNE wind conditions impose themselves on the crew, making them realize that the predictions were not necessarily true to reality. The crew members have no other choice given the position of the boat than to head towards the Rock by taking a longer and slower route (lines 113-122, 135, 141-142). From his position, Jeroen evokes the rule of staying below layline as a basis for the race to make sense of the team's situation (line 134,). François (the owner) makes sense of the situation by repeating Jeroen's words and asking Hubert to move on (lines 147 and 152). Philippe, the navigator, whose legitimate position in the previous configuration was based on the script and the actions taken to verify it, loses his authority (lines 148, 150) in favour of François the owner. Hubert, for his part, goes on to invoke the need to have up-to-date data for the next forecasts (line 135). The author and Philippe start to make sense of the situation evoking another non-human (the Highs being up North which would

explain the new wind direction) (lines 154-155). However, these positions do not precede the process of constructing meaning. It is in the agential flow through the material-discursive practice that these positions become possible and it is from there that they make sense. Thus, this renewed material-discursive configuration makes some practices more meaningful than others, such as staying below layline rather than following Fritz's script. The very important experience of Jeroen and François (Whiteman & Cooper, 2011) also becomes more meaningful. It helps embedding the crew back into the ecological environment and into the race.

To conclude

Through this article and this analysis, we show that the meaning produced was not solely based on humans but was, in Barad's sense, a phenomenon produced within the intra-actions. The first part of the analyzed episode shows how the material-discursive configuration frames the construction of meaning making Fritz's script more meaningful than other ecological clues. In line with Cornelissen's research on the unfolding of events leading to a police blunder in London, we clearly observe how intra-actions between humans and non-humans produce the frame of reference that conditions their construction of meaning. It also highlights how the crew seems ecologically *dis-embedded* in phase 1 and *re-embedded* in the second phase (Whiteman & Cooper, 2011) through the intra-actions of both humans and non-humans. In line with the work of Hutlin and Mahring, which analyses two moments illustrating the management of patient flow in emergency rooms, starting from the same human and non-human components, this episode illustrates the rapid transformation of the material-discursive configuration in the actions' flow and what it produces in the construction of meaning. In addition to their study, we try to show the articulation between the two phases. To say it otherwise, the second configuration emerges in the flow from the first configuration.

Table 2: Fritz' weather daily briefing

From: Fritz XXX
To: "François , Mathieu
Cc:
Bcc:
Date: Mon, 7 Aug 2017 07:21:57 +0000
Subject: Fastnet 7 august

Hey Francois!! Everything OK?

Overall

For the moment, there is a front over you. WSW 12 knots [strength]?

When you arrive at the Scillies will the wind decrease W 5-10 knots. So the two following hours the wind will go to W 5-10 knots, and at noon to NNW 10 knots.

On Tuesday 8 August, the Azores highs to the north. Between this high and the depression comes an NW-like air current in the Irish Sea. Around 12 utc a rain line passes through (trough)

On Wednesday 9 August, the air current continues to move north on the eastern flank of the high, the core of which lies to the west of Ireland.

On Thursday 10 August, the core of the Azores high will be located just in SW of Fastnet Rock and will then start to move south.

On Friday 11 August: it seems that the high gets pushed away to the south and a western current is being installed.

Wind

Monday 7 Aug: currently WSW 12 kt, within 2 hours to W 5-10 kt, by noon to NNW 10 kt, tonight around 18h to WNW and from 22h to NNW 10 kt.

Tuesday 8 Aug: NW 15 kt to NNW 20 kt in the evening

Wednesday 9 Aug: NNW 20 kt to NNW 15 kt

Tuesday: Wind direction will go from NW to NNW and will rise from 15 knots to 20 knots
Wednesday: the direction stays NNW but the wind strength decreases from 20 to 15 knots

Thursday 10 Aug: N 10 kt to W-WNW 10-15 kt

Friday 11 Aug: W 10 kt to WZW 15-20 kt

Key points

Right after Start point into the bay to catch the shift to the right the following hours !!!!

Let TSS on starboard !! So between the Sillies and TSS upwards to stay north of the Rhumbline to catch the shift from NW to NNW tomorrow, and then approach the port in NNW wind over the Rock. Always lay the first part of your route to Fastnet rock north of the layline and always hit the layline !!

After Fastnet Rock, it will be a matter of staying as far east as possible in order to stay away from the approaching core of high pressure.

Have a nice sailing,

Cheers,

Fritz

	Transcribe of conversations onboard of Moa 7-8 August 18	
	Conversations	Comments
1	**170807 – 21 :35 / 0081 (inside, at the chart table)**	Luc (N) & François (skipper) are looking at the trajectory of Moa on the navigation system (figure 4). The boat at this moment is heading toward the Ilse of Scillies doing the shortest route possible. Luc and François then discuss about the best way to go around the Ilses. They show a route going north between the Ilse and lands' end.
2	A (author) : Who has professionals onboard?	
3	François : Codiam ! Yes, yes, they pay one or two figarists, 400 euros a day…	
4	François : Luc, this, this does not work, hey ! It does not work ! (joking)	
5	Luc : with this course, we just reach this point (showing a point on the screen)	
6	François: Which point?	
7	(Luc shows a point on the map)	
8	François : Ah ok, perfect !	
9	A : are these the three exclusion zones? (pink hatched rectangles on the map)	
10	Luc : sorry ?	
11	A : are these the exclusion zones in pink ?	
12	Luc : yes, we need to pass here. We gone do this, and than this, and then hop. It's not worth bothering with these pebbles! (the Ilse of Scilly)	
13	François : Yes.	
14	Luc : another 27 miles.	
15	François : we are here. (showing our position on the map)	
16	Luc : (talks, not audible on the recording)	
17	A : is the wind staying like this until tomorrow?	
18	François : same strength until tomorrow night. So that's nice. But, it goes north-northwest. Now it is in the Northwest.	
19	A : so it is going to turn right, hey.	
20	Luc : so we go upwind and we stay a bit right of the line.	
21	A : we do not need to tack.	
22	Luc : it may be necessary to pass here. Then, it will be tac-tac-tac.	
23	A/ No, I mean for now on, the 27 miles, it is straight ahead.	
24		

25	**170807 – 21h41 / 0082 (on deck)**	
26	(retrospective sensemaking on what happened on the first day)	The crew is discussin Sunday's events (see long article). They make reference to the decision to go at sea instead of staying along the south coastline with the rest of the fleet
27	Mathieu : I thought we would go all the way and stay with Codiam (our main opponent).	
28	A/ He (Luc) wanted to go and stick to CODIAM.	
29	(end of retrospective sensemaking)	
30	Jeroen : It is not necessary to sail too high if the wind is going to shift. You have to stay away from the exclusion zone.	Jeroen and Mathieu discuss the position of the boat according to the wind direction (current and future) and also the direction of the waves. Both elements have an impact on the boat speed.
31	Mathieu : Yes ?	
32	Jeroen : you can certainly sail in the 230° (direction of the boat).	
33	Mathieu: yes but with the wind ?	
34	Jeroen : yes, but it is better to sail lower and have a good speed. With a wind angle of 32° or so (angle between the boat and the wind direction).	
35	Mathieu: more or less following the waves…	
36	(back to retrospective sensemaking)	
37	A/ What is stupid, it is this tube? (making reference to waterway in the boat during the first day)	Retrospective discussion over the events on Sunday.
38	Mathieu : That's true !	
39	A/ Then the genoa !	
40	Mathieu : yes, yes,(sggh) but after the fact.	
41	A/ At one point, François asked if we had time. He could have done something fast. And then, we could have turned in fact. "Do we have time to repair? "	
42	Mathieu : it is complicated. I was telling myself. Do I dare to piss them off?	
43	A/ At the same time, they did not take much time. We could have recalibrated (our position compared to the other boats).	
44	Mathieu : they repaired fairly quickly, indeed.	
45		
46	**170807 – 21 :56 / 0083 (on deck)**	

47	Luc : if the wind turns to the right again, it will be necessary to tack so as not to be too high above the line.	
48	A/ What is the course that must be done then?	
49	Luc : 265 on the ground.	Luc is cautious and mention the fact that if the wind turns right we will need to tack in order to stay in the green diamond (fig 8). Here crew members are discussing the course to do on the ground. Indeed, the streams influence the course of the boat. For instance, if the stream is pushing on the right side of the boat, the boat course will deviate to the left (like a crab). Hence, Mathieu asks to have the right metrics on the LCD screens nearby the helm in order to check if he is on the right course on the ground (COG) and also the optimum wind angle (AWA). Those metrics are especially important during the night in the dark. Thierry says he will stay on watch as regard the wind changes.
50	A/ Do not put the COG (course on the ground) somewhere?	
51	*A configures the screens near the bar to change the display of information.*	
52	A/ you have to press another button at the same time? Just on nav? We let the speed here and the COG.	
53	Mathieu : I want the AWA (Apparent Wind Angle)	
54	A/ you want the AWA here? (showing the steering column)	
55	Mathieu : no, at the mast.	
56	A/ I will put the COG downwind then (there are LCD screens on each side of the steering column, downwind refers to the side of the boat opposed to the wind side)	
57	A/ It's 265°?	
58	M/ Yes.	
59	A/ Now, we are on the 282? Yes, COG = 280.	
60	Thierry : I'm going to watch the wind if it turns right again ...	
61	[2:00 timestamp on the recording]	
62	The crew on deck discusses the tuning of the genoa	
63	[8:30]	
64	Jeroen : I see a light. I should check on the map. I think that it is the Sillies.	
65	A/ It's probably the Sillies, yeah. Super nice as sailing conditions ...	
66	Mathieu: we have not yet had much sun in fact. The start was good…	

67	A/ When we slept, there was sun, I think.	
68	M/ Rain also !	
69	A/ There you are well in your down ... Mmm	
70		
71	**170807 - 23:09 / 0084 (at the chart table, approaching the Ilse of Scilly and the exclusion zones)**	
72	Thierry : its good. We have good navigators, hey!	
73	A/ And if you look at Fastnet, is it better to go further north?	
74	François : in the North, you are 4 miles more.	Crews members discuss the options on the navigation system as regards the rounding of Scillies Isle.
75	Thierry: I think we will continue very north.	
76	Mathieu : you want to stay north for the windshift?	
77	Philippe : if we work upwind then we are better off to stay like this. Otherwise we need to bear away.	
78	The challenge, this is to see the wind that we will have there.	
79	François : do you agree that if we go north we go away?	
80	(A goes on deck)	
81	A/ Mathieu asks, what do we do as angle?	
82	A/ 35° on AWA.	
83	*(Philippe takes his tablet to simulate the evolution of the wind and analyze the racing options.)*	Here Philippe (N) is interacting with another simulation software on his tablet. Simulations are based on forecast and not in realtime weather observations.
84	Philippe : The guys are here. They will turn earlier and they will hit the westerly wind earlier. What if you go here.	
85	A/ Is it a decrease of wind there? (showing the light blue zone on the tablet screen)	
86	François : 6 knots and it will be against current. They will have the current with them.	
87	(Philippe continues his analysis by playing with the timeline changing the weather based on NAVIONIX weather files)	
88	[9 :00]	
89	Philippe : We still have the current against for an hour?	

90	A/ I would bear away a little bit more already.	
91	**170808 – 3h12 / 0085 : ---**	
92		
93	**170808 - 3h52 / 0086 :**	
94	A/ Has the wind turned already?	The wind starts to move to NW
95	Thierry : Yes, it comes from the 290°	
96		
97	**080817 – 07h25 / 0087**	
98		
99	(In the morning nothing special, sitting outside, we eat breakfast. It seems to be colder. Everyone is well wrapped in their wax with hood (as a reminder it's the month of August) but it clearly indicates a cold north wind ...)	
100		
101	**170808 – 08h09 / 0088**	
102	*(Beautiful pictures of the boat upwind)*	
103	**170808 - 17h04 / 0089 :**	
104	A/ Can not we go there or what? We cannot pass between the triangles? It makes us arrive (at the Fastnet Rock) around 4am. What time is it?	Discussing the arrival at the Fastnet Rock where there is a triangular zone where the boat is not allowed to sail
105	Thierry : 17h.	
106	A: ETA 5h in the morning.	
107	Luc : No, 3H. We are not going to see it.	
108	A/ unless there is a full moon, it can be beautiful.	
109		
110	170808 – 17h07 / 0090 :	
111	Hubert : you go up wind. No question!	
112	A/ Speed up!	

113	Hubert: we will see at the end. Sometimes we are at the right side of the lay line but some times. We are on the lay line. We certainly do not need to bear away…	Hubert just checked on the navigation system our position. It seems that we are at the limit of the green diamond (NNW forecast)
114		
115	170808 – 17h11 / 0091 :	
116	Hubert : they make 305° that's good because their route is the 305°. We cannot do 305°. There, we do not ask any question. We tacked at the right time and we'll see you soon after. We cannot be more on the road than we have been so far. ETA 3 in the morning.	Here, Hubert talks about the other boat as they appear on the navigation system. We can see their name, direction and speed). It is interesting to compare ours with theirs to see if they have the same weather conditions or not.
117	Stijn : at this speed ?	
118	Hubert: yes with this boat! (Joke). You cannot win with this boat on the course downwind if you don't do a good upwind…	Moa is particularly performan going upwind (current course)
119		
120	**170808 – 17h12 / 0092 :**	
121	Hubert: we are a bit over layline.	Hubert confirms that we are over the layline (outside the green diamond)
122	Stijn: Everybody who is coming through the North is fucked up! They are screwed!	Stijn comments that all the boats that took a north route are not in good position in the race
123	Hubert: (makes a joke)	
124		
125	**170808 – 17h28/ 0093:**	
126	(We are going to change the genoa)	
127	**170808 – 17h40 / 0094 :**	
128	(Effective change of the genoa)	
129		
130	**170808 – 18h00 / 0095**	
131	(François wake up and arrives on deck. Talks about the current situation but inaudible on the recording)	
132		

133	**170808 – 18h05 / 0096:**	
134	Jeroen : if you sail over the layline… We went too far up North. This is not good.	Jeroen comments on our choice to go too far up North
135	Thierry : yes, but the wind is now in the 20°!	Thierry says the wind is now in the NNE which was not expected
136		
137	**170808 – 18h07 / 0097:**	
138	(Watch B arrives on deck)	
139		
140	**170808 – 18h20 / 0098:**	
141	Hubert: for the the wind is going to 25°, it was not expected.	
142	A while ago, we were fine.	
143	Jeroen: you have to stay off the layline!	Jeroen recall the basic principle not to go too close of the diamond's limits
144	Mathieu: Luc ! The rock is 290°.	
145		
146	170808 – 18h28 / 0099 (François, Hubert and Philippe inside the boat nearby the kitchen)	
147	François : we go too fast, we go too far. Hup, it's over. Hubert, it is useless to discuss it, it brings nothing. This is how it is, we go to the rock, it's over!	
148	Philippe : the wind was forecast at the NNW, it may return to the NNW. Now he is at 25 and he goes to 40, there we are not good at all! I have never actually seen the wind marked NNE. It is best marked NNW. Even on Fritz's mails, it's never marked NNE.	Philippe comments on the forecast and the fact that he never saw in the simulations the wind going to NNE.
149	François : No (affirmative)	
150	Philippe : 25 it's NNE. The point where we decided to tack, it was more for a wind of NNW.	He adds, when we decided to go up north, the wind was still in the NNW.
151	A/ At the moment we tacked, it was not at NNE. It was…	

152	François : we cannot take this risk to go so far on the layline. It does not bring anything. We are in good position. We go straight to the rock, the discussion is over! We are not going to pursue this discussion, agreed Hubert?	François recall the principle of the layline that is the diamond's limit not to cross.
153	Hubert : what is certain is that we need to take a weather forecast at the Rock because we cannot make an upwind and downwind route without weather forecast.	
154	François : that, I'll have at the Fastnet, it is not difficult.	
155	A/ is it possible that the Highs (see Fritz mail) went upper North, is it ?	
156	Philippe : Yes.	
157	A/ it would explain the nice weather.	
158	François : it is not dramatic, hey. We are on a good pace.	

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