Additional words from Mr. Unno

I’m sure that many of you are already aware but there have been things happening in the last 15 years equivalent to the amount of changes that have happened over 300 years in the course of humanity’s history. As society is updated at a rapid pace, there is something that we need to bear in mind.

That is, “what was the norm up till now, will not be the norm moving forward”.

So, what does this mean?

In 2014, Professor Michael A. Osbourne from University of Oxford announced several jobs which may disappear with the onset of advancement in technology.

I will give you a few examples.

First, lawyers, judges and prosecutors. Codes were made for precedents set by the court and when the AI was made to learn the reasons behind those precedents, the AI was able to reach the same decisions made in the precedents for 80% of the cases. This program was made in just an hour so you can imagine what will happen if more effort was invested in it.

Accountants. Doing calculations is definitely one of the things that AI is good at.

Teachers. Using AI will make it possible to provide teaching that fits around the speed at which each student learns. I’m sure there are no teachers like this in Taunton but if there are teachers who use the same teaching material across a number of years, those teachers will be the first ones to be replaced.

Researchers. The type of researchers that will survive are those who not only conduct research but who are able to think about how they are able to utilize the results for the benefit of the society and who are also able to raise funding for their researches themselves. The ability to do more than one thing at a time is a trait that is required for researchers also.

Civil servants. Those who are able to make policies will survive. I am not sure about the others. Their work is not entirely unrelated to yours as charts you make are used in many aspects of policy making.

Seafarers. The era for unmanned operations at sea is just around the corner. The world will change so that seafarers as we have known them will cease to exist. The word “seafarers” may even disappear altogether. Their roles will definitely change. And this goes not only for seafarers but also for others. The entire industry of logistics at sea will change and new jobs will be created as a result.

So, what will become of cartographers? That is to say, what will happen to all of you?

I will try to answer this question from 3 points of view.

First, will the editing of paper charts and electronic charts be fully automated with the introduction of AI? My guess is that many experts in the field of hydrography will say that this would be impossible. They may say that plotting a chart requires delicate balance that could only be achieved by humans or there may be a risk that important information may become hidden by the placement of geographical names over them if we were to plot charts using AI.

My personal opinion is this. First, have the AI “read” large volumes of what are widely regarded as good quality charts. Next, get the AI to find rules from this big data. If we then provide the AI with data regarding coast lines, water depths, Aids to Navigation etc. I believe that it will not be too far into the future that AI will be able to produce good quality charts, even managing to learn and overcome the somewhat artistic aspect of chart plotting such as deciding where to place names of geographical features.

Second, will cartographers be needed in an age where vessels no longer need to be navigated by humans? The answer is “Yes”. Cartographers have a job similar to interpreters in that they make it easier for navigators to understand information they need. Regardless of whether it is a human onboard who is navigating a vessel or AI navigating it, it does not change the fact that they both need this information. The only thing that will change for cartographers is for them to obtain data from hydrographers having fully understood what information is needed by unmanned vessels and then translate that data into information that could be made use of by AI. In other words, cartographers would be required to gain a good understanding of the needs and issues of both navigators and hydrographers through dialogue.

Third, I ask this question - cartographers with what kind of skills will survive into the future? In the future, I am not sure whether the information required by AI on an unmanned vessel will still be called a chart. I’m also not sure whether those who are in the job of making or editing it will be called cartographers. As the concept of “navigational charts” undergoes transition much like that for seafarers, I believe that, related to what I have already discussed, what is required of you all are as follows.

“A close dialogue with both hydrographers and navigators” and for that, the most up-to-date knowledge on the rapidly evolving navigation at sea, a level of knowledge that is comparable to that of a hydrographer regarding measuring the depths of the ocean and bathymetric data, a deep understanding of AI and a broad viewpoint.

I wonder what you all make of this. I won’t be surprised if there are different opinions.

If society changes, so will jobs. This is not something to be feared or avoided. It is something that is organic, and we should simply adapt.

The message that I want to convey to you is to make the effort to adapt yourselves to the speed and changes that are happening around you. For this, you need to continue taking action and to never stop thinking and challenging. The commoditization of skills is gaining speed with the progress of IT and the internet. In the modern era, it is all too easy to learn and copy what others have done before. We will not be able to arm ourselves with uniqueness or some specialty if we do endeavor to develop new technology. It is important to continue challenging in order to create new values.

In the old days, there were many hurdles to overcome when one was to challenge something. Lineage, academic history, money, ability, connections, experience, qualifications, education are examples of things that may have been required from you and the list goes on. Nowadays, however, it does not matter if you do not have any one of them. Have courage and confidence to make that one step forward. Don’t be afraid of the future or trapped in the shadows of the past but live now to the fullest.

The purpose of the Nippon Foundation fellowship programs is not so that the fellows can get the job positions that are valued but rather so that they can create jobs that have value. It was upon that wish that we started the program with IHO.

With the knowledge gained through your training at Taunton and the network you have gained by becoming a Nippon Foundation fellow as your base, I hope that everyone would be able to “survive” this age by adding your own spice and taking the initiative to create new things on your own.

In order to pass on a bountiful ocean to the next generation and to encourage humanity to care about the ocean, I urge you to make use of this gathering in Singapore and to take the initiative to lay the foundations for future action.