

The Day The Dolphin Spokeⁱ

By Tom Jubert

What you have to understand is that we weren't really trying to communicate. Not fully. Our grant was to automate existing communication, it was monkey work. We (by which I'm supposed to mean the government, but by which I really mean humanity) have been communicating with dolphins in some form or other long before the 21st century. Basic concepts, sure: food, play, jump. It was traditional, symbolic language: a wave of the hand means leap through the hoop; an erratic swimming pattern says "I'm in trouble". We were supposed to be doing the same with ultrasound. A basic computer interface, a few dozen verbs to choose from, and the program outputs a sound wave the dolphin can sense and act on.

We were given a small underground lab which, contrary to popular belief, means we were bottom of the pile. Subterranean is where you put the guys whose productivity can afford to take a hit from dank conditions and zero natural light - if they called it a basement it wouldn't sound so dramatic. The important, top secret guys, they're somewhere far more plain sight. That house with the metal shutters on your leafy residential estate? Take a closer look next time (though really, actually, *don't*). In the end our budget barely covered the tank and computer equipment. We had to get the dolphin from the Japanese - needless to say she wasn't in great shape, but at least she didn't wind up on someone's dinner plate. Thinking about that, knowing what we know now... makes me sick to my core.

The thing was, our program worked better than we expected. It was a joke, really, that first question. Quinton tapped it in after one too many espressos.

> *Can you understand us?*

It was a sensible enough place to begin the first interspecies dialogue, though it hardly had the impetus of "One small step for man...". If we'd known what we were about to discover we could have been more prepared, but no one was more surprised than Quinton and I when the dolphin first responded.

"The Dolphin". Jesus. She ought to have had a name. She *did* have a name, we just didn't know how to use it. That's another thing we're going to have to get accustomed to now. Dolphins have a kind of signature whistle. It's like a name, but it's more than that. Imagine if just by calling out "Thomas" you could also communicate your exact location, moods, desires... in many ways their language is far more complex than our own. No one's claiming that dolphins are as smart as we are, but just as the word "person" can no longer be considered synonymous with "human", over the coming months we're going to have to seriously reconsider our picture of what constitutes intelligence.

Regardless of our inauspicious start, I think I can say with no fear of arrogance that what we were about to uncover was the greatest breakthrough in communication, ethics and even science itself (oceanic or otherwise), since Venter in 2010. When Venter took a dead bacterium and inserted synthesised DNA it came to life. The first synthetic organism. The key moment, though, when it multiplied... the second they realised they had two, then four, and by the seventh day over half a million man-made life forms... that's the moment Quinton and I shared that day.

He may have been taking it too far, but Quinton suggested it was the single greatest advance since the first ape looked inward and said "I am". I wish I could ask him what he thinks now (Quinton, not the ape, though that could be interesting too).

The dolphin watched us for a second, from the murk at the far end of the tank, and then slowly, deliberately, swam over and nosed the pedal we installed so she could tell us when she was hungry.

White mice are smart enough to hit a button when they're hungry, it's not really intelligence at all, just habit. We draw a line, in animal biology, between instinct and intelligence: the latter indicates self-awareness. When a dog sits because you told it to it's not that it understands; it doesn't have a thought process which runs "If I sit I will be rewarded". It just has a natural instinct that prompts it to act in ways that have previously proved advantageous. The difference between a

person and an animal, it's held, is that a person has an interim stage between motivation and action, and we call that stage 'the self'. It's the bit that looks at the motivation and *decides* how best to act.

It's the bit that bothers to say "I am", as opposed to just getting on with being.

Thing was, she wasn't asking for food: she'd just been fed. This was a response. It was an answer.

It wasn't until days later that we figured out what was going on in the code. It involves a lot of floats and IO streams, but essentially while the program had been designed to accept only a handful of predefined verbs, it was by default hooked up to a full dictionary and grammar set. This alone would have meant only garbled translations, but combined with the extreme fidelity of the cetaceous ultrasound the program was able, with some minor bugs, to extrapolate. In other words, the dolphin language is really only made up of a handful of verbs, but through inflection and context - just like the signature whistle that's both a name and a status report - these can amount to a sophisticated language that can be learnt extremely quickly by a couple of terahertz CPUs.

It took us 30 minutes to hook up new pedals. Even then we knew, you see, what it was we may have stumbled upon. We knew we didn't have long to keep the thing a secret. We replaced the bright green "FOOD" pedal with "YES". The "ATTENTION" pedal we replaced with "NO". Then we asked again.

> *Can you understand us?*

"YES".

I can't say we weren't excited, but we tried to be professional. This was not enough. This was, from a methodology perspective, a coincidence. It was homeopathic medicine curing a back ache. We both knew the second question. The real question. Quinton entered the text without speaking.

>*If you understand us press the 'NO' pedal.*

I don't recall thinking anything at the time, just waiting for a response, but I must really have been running the numbers. How many tests would it take to ascertain theoretical validity? What standard deviation could we expect when we brought in additional specimens? She hovered for a moment, and I wondered if what we were pursuing was crazy. With retrospect I think she simply had an eye for drama.

"NO".

Quinton and I exchanged glances. We double checked, triple checked, of course, but we both knew it. It was, I don't mean to sound crass, but it was like locking eyes with someone you should never have slept with. That uneasy knowledge that you've shared something intimate, something fundamental, without even thinking, long before you were prepared to do so.

So we argued. We argued for half an hour. This was crucial: what should we ask next? Had our options not been limited to yes or no answers it may have taken considerably longer. We realised that the information we pursued at first would not only be remembered throughout human history, but through *sentient* history. We could no longer consider ourselves the only species capable of recording events that would go on to shape a civilisation: there was the distinct possibility that we were engaging with an - albeit accidental - emissary from another civilisation. We had to get this right.

Almost precisely forty minutes following first contact we had come to a conclusion with which we could at least find no obvious faults. There are a number of criteria we would tend to require for someone or something to qualify as a 'person'. One of those, quite naturally, is being alive (though with the great many barriers reason has broken down over millennia, even this is something I would consider open to discussion). Another is the ability to feel emotion, to be motivated by something other than synaptic spontaneity. One of the most important is having a self that one can identify as separate. Quinton allowed me the honours and with creaking wrists I input:

> *Are you an individual?*

I know it was a refraction in the water, or a stray strand of weed, and I know perfectly well that dolphins don't have eyebrows - but if I were a lesser man I'd swear she raised them at me.

"YES".

I'd barely considered the ramifications when Quinton hit the enter key again.

> *Does 2 + 2 = 5?*

We'd not discussed this. We'd not considered the repercussions of testing cognitive ability, or whether such a thing was even reasonable in the context of an entirely alien mind. We (by which I mean science) weren't even fully sure logic was the essential perspective of an animal mind.

The human mind is constructed wholly around processing the world using the power of reason. We look at things logically (eg I am hungry, if I eat an apple I will no longer be hungry, therefore I will eat the apple). For all the ever present dogma around the value of acquiring information through spirituality or faith rather than experiment, even these concepts are incommunicable other than through reason – trying to propose an alternative system to logic from inside of it is analogous to trying to eat one's own head. Blind belief will not feed you.

Importantly, however, this is not to say that the world is not comprehensible in some entirely different fashion – only to say that if such a thing, an alternative to logic, were existent, we certainly can never be privy to it. Which, really, is a long way of saying that if dolphins can't do maths that doesn't mean they aren't smart.

The rattle of the "NO" pedal impacting the reinforced glass made the issue temporarily moot.

Mathematical understanding. Advanced cognitive ability. The final criterion for qualification as a 'person'.

After this we had to continue. We asked questions as fast as we could tap them into the archaic Spectrum keyboard. We asked questions faster than the program could parse. For ten minutes we ignored the tank, queuing up queries and concerns, the scientific method lost to school boy enthusiasm.

For ten minutes we hardly noticed that we weren't getting any more answers. It took us until the early evening to realise why the conversation had died out: a dialogue is supposed to be a two way process.

It perhaps seems remarkable we were so quickly able to reverse engineer the program to allow the dolphin to ask questions back. From a C++ perspective it was simply a matter of reversing some conditionals and stealing an underwater microphone from next door. We still had not reported our findings, but it was only a matter of time before we would have no choice.

As our transmitter continued to churn out demand after demand...

> *What is your name?*

> *Are you happy?*

> *Do you believe in god?*

...we set about connecting the microphone to a new terminal and rigging up a display. There was a problem with the inputs, DVI-D to HDMI, stupidly outdated technology, and we scurried about the lab seeking home grown solutions to the modern equivalent of a paper jam. It was only when we returned to the tank and its bank of whirring black boxes that the obvious hit. There, spooling out of the ancient dot matrix printer we kept hooked up in name of nostalgia, was the first true dialogue between two sentient species. The dolphin had been speaking, we just hadn't been listening.

```
//What are your names?
```

```
//My name is 88800BA#error
```

```
//Why aren't you listening?
```

```
//Please stop asking me questions
```

```
//Please stop asking me questions
```

```
//Please stop asking me questions
```

To our left the transmitter continued to chug through our list of queries.

> *How connected are your societies?*

> *Do you believe in good and evil?*

We saw our mistake immediately. We'd set out to begin communicating and all we'd done was issue a series of demands. We both went for the Esc key to cancel the operation and the check list of queries shuddered to a halt. Though to our ears the noise in the room was exactly the same, silence broke on the invisible ultrasound argument that had been running for half an hour. In her tank the

dolphin sank slowly to the bottom, exhausted, before whisking around in an elegant pirouette. Her words emerged from the printer:

//Thank you.

//What is good and evil?

We exchanged glances, Quinton and I, and set about bickering over how to answer.

//I am interested to know more.

We looked at the printout. We were going to have to stop thinking about this like an experiment we could ponder at leisure. We were ambassadors now. I began typing.

> *Good and evil, or morality, is a set of rules that define how people ought to behave.*

//What is it for?

> *In general, a moral action is not supposed to be for anything other than the sake of being good. If someone acts for gain or reward it is generally not considered a moral action.*

//We have laws too.

Quinton ushered me to one side and took over at the keyboard.

> *Please tell us*

//We have laws to ensure our species continues. Is this like your morality?

> *We find your laws interesting, but our morality is different from our laws. Laws for us help to continue our society, but they stem from our morality, which itself comes from somewhere greater.*

//But what is the point? Why do you believe it?

> *Some things are just important to us. Sometimes a person will have to sacrifice themselves to uphold their moral principles.*

//Am I a 'person'?

> *We think you very probably are.*

//My kind will resent being subject to your morality.

Quinton hurriedly clacked out a diplomatic response, ie he changed the subject, but the die had been cast, the topic immutably raised: the issue was no longer what questions we needed to ask, but what information we had to keep to ourselves.

The whole of human history, of human understanding: relationships, wars, politics, fate... every topic we might broach would have far flung repercussions on this species' understanding of our own. This was the terror: when such matters were taken from our hands, in what we assumed would be but hours, what then? When our bosses, and our bosses' bosses, discovered what we had, how would they choose to leverage it? That was the word, 'leverage'. How would it be used to their advantage?

So it was a matter of time, a matter of urgent prioritising. We had to explain what was going to happen, how the people she would be dealing with for what may turn out to be the rest of her natural life were not representative of our kind as a whole. We could be better than this. We tried to explain what was so different about the rest of us, but – perhaps for our own lack of understanding, or maybe for a simple bug in the code - we failed to get it across. She asked:

//Do other people have different morals?

We thought, and replied:

> *No, their justifications are simply of a different scale.*

//Are other people more intelligent, or more logical?

> *No, not in general.*

//So what is the difference?

This was the last time we spoke with the dolphin. We'd failed to submit the day's report at 9pm, and Lieutenant Armitage was swiftly on the scene. Lying about our findings was out of the question – treason is still considered a fairly major screw up – and within what seemed like moments of delivering our report the Lieutenant was outranked by an unfamiliar face, a Captain. He was then upstaged by a Major, followed by a Colonel, and that's when we were taken to London for debriefing.

It's amazing, really. All our equipment was secured, blind spots in our documentation filled laboriously in a series of interviews, our findings deemed top secret, all within a couple of days; yet they still missed something. The one thing we lied about, it seems so obvious. Perhaps it's simply their own arrogance, but for some reason they never considered that in an area of research staffed by some of the country's greatest scientific minds, no one would be smart enough to make copies of the code.

Days later, I think back about how we would have answered that question.

//So what is the difference?

What made us think that humanity at large would be any better than the assorted military brass that right now is either probing the dolphin for information on enemy sea defences, or long ago incinerated her along with all our research?

The short answer is that I don't know. I suppose, at heart, I hope the knowledge that we are not alone may change things. The realisation that there are entirely new ways of being a 'person' without being a human; ways of understanding the world without believing human things like morality and fate.

I hope all that will force us to be honest with ourselves, and with the people who now share our home.

Tomorrow, you will be among more than one hundred marine biologists, programmers and journalists who will receive in the post a floppy disk containing a file labelled echo.c. Given what it represents it's a remarkably short piece of C++ code that should be parsable by any standard interpreter software.

I hope you have something more worthwhile to say with it than we had.

ⁱ Inspired by 'Dolphin People'

Thomas I. White. (2010). Dolphin People. Available: <http://www.philosophypress.co.uk/?p=1279>. Last accessed 27 July 2010.