

Black Holes

Helen Eastman

The thirteen-year-old is correcting the seven-year-old.
It is important that he knows that
a black hole is not actually a hole.
Or black. The thirteen-year-old has inhaled
Stephen Hawking (abridged) and will not stand
for such inaccuracies of language.

The language rebels. Its nomenclature goes
beyond the literal, it retorts. Where no light
reflects, what better word than 'black'?
And while the shape might be more
'gurgling plug' or 'Dorothy tornado',
a hole can stretch its 'o' in four dimensions.

The language concedes. Okay, objects
move through time as well as space,
and yes, when you add gravity to the mix,
mass and energy affect the curvature
of spacetime by their presence.
The teenager snorts, derisively.

The language raises its voice. Surrounding
every black hole is an event horizon:
the boundary between where an object
could escape from the black hole's gravitational pull
and where everything irrevocably falls
towards the central singularity.

The teenager wanders off. The language
regrets shouting. It is the seven-year-old
who mentions beauty.

Bubble campanology

Helen Eastman

The masked barista tells me that she can tell
the quality of coffee from the sound the milk
makes bubbling. 'Pret's shit', she adds.

And I want to tell her about the dolphins;
how they blow bubble-nets to herd the fish,
that every bubble has its own sound,

that we learnt from the dolphins to use
twin pulses to find the thing of interest
amidst the clutter - the landmine in the debris.

I want to tell her that bubbles are like bells -
that we can be campanologists of air.
And if we listen to those bubbles

we can tear apart tumours, destroy bacteria,
monitor climate change, protect marine
wildlife. It is all in the vibrations.

She draws a smile for me in the froth
of my coffee, and tells the new trainee
that I'm a regular. And that I come in

when I'm having a bad day. Do I? I want
her to teach me the sound of good coffee.

In the intelligent laboratory

Helen Eastman

In the intelligent laboratory, people, equipment and computers work together.
In the intelligent laboratory, everyone has a Bunsen burner licence, but no one uses it, because the sparks are in our head and the synthetic scientists can pre-empt the outcomes faster than we can light a taper.
In the intelligent laboratory we blend the computational and the theoretical, except on Thursdays, when we stop for Bourbons at three, because team-building becomes even more important when not all the team are human. The A.I. lot are improving their Strictly banter, at an alarming rate.
In the intelligent laboratory we focus on chemical informatics and the application of novel mathematical approaches but on Tuesday we read novels for our feminist book club led by the topological data analyst. On Fridays she makes advances in machine learning, and we stitch quilts for cold students, who cannot leave campus and raise funds for their train fares home. In the intelligent laboratory we value learning, and people and progress.
In the intelligent laboratory we tell stories.

Learning to Breathe again

Helen Eastman

I never thought much about breathing
Until two of us went to sleep and
Only one of us woke up.

*

Today, I'm looking at a model of a lung.
It is for screening drugs. It boasts 'Goldilocks'
membranes - not too thick, not too thin,
and pores not too big or too small.

Was I remiss to just assume you'd keep doing it?
Should I have reminded you daily? An hourly call?
Tattooed it to your hand? Banksy-ed the wall?
Could I have changed anything, at all?

*

There was the voice tutor at drama school -
and the N.C.T. antenatal classes. They kind of merge in my mind.
Breathe in for five and out for twenty... or was it twenty and five?
Don't lift the shoulders. Or the chest. Breathe into
the small of the back. Breathe out on an 'aaah' sound,
Or an 'oooo' sound. Or 'eeee'. But not all at once.
Control the breath. Release it gradually.
We are not steam trains. Control.

*

Now, it is not often I have to remember to breathe.
And only sometimes with the help of a paper
bag (thank you Greggs) or a kind passer-by,
counting. It is not often I have to remember to
breathe. And only sometimes when I smell
that mash and disinfectant of hospital canteen.
It is not often I have to remember to breathe
and sometimes I can sleep next to someone without
needing to hear them snoring to be sure that they are
breathing too.

Not Knots

Helen Eastman

The mathematician is explaining what a knot is not.
And that it is easier to tell if two knots are alike or not
by comparing the white space around them – what they are not.
Their 'complement'. Their 'inverse'. And all I can think of
is all the places that you are not. And my shame that
I have never found you in my black marks on white nothing.
Because, from the moment we scattered your dust,
you have always been the sea and not the ship, the wind
and not the mill, the sky and not the star. The page
and not the poem. The not, and not the knot.