

MAPPING PERCEPTION

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Coming from the bright light of day to the inside of a cinema the eye can at first see little or nothing of the surroundings but after a while it adjusts itself and becomes accustomed to the change.

There is no accident just as there is no beginning and no end.

New born babies over half a million a year another life beginning another chance another start

Failure to progress

Fetal distress

Emergency caesarean section

Resuscitation and mucous extraction

Mum and dad visited aware of baby's condition

Seen by neurologist

Slight grasp high pitched weak cry

Visual problems, jerky eye movements or dancing eyes.

Almost a nystagmus no head control global problems insults across the board

She is floppy an generally delayed.

Some investigations have been arranged for baby, we will see her again in one year

Lying at rest in his special chair he is quite still

Leila What have you been doing Eden? Have you been looking for the yogurt ? Is that what you were doing? Looking for the yogurt?

Andrew Be careful Eden or you'll trip and fall in the yogurt

Dudley Eden has Joubert's syndrome of cerebella vermis hypoplasia. Ventilation rhythm problems and several neurological complications. All round general delay but no clear decision yet about intellectual function has been made, though I suppose we must at assume that it is better than is at present obvious.

Can you hear it can you hear it?

Your brain.

He's touching me.

He's touching me.

Touching.

He's touching me.

Touching he's touching me .

Touching.

Apparently it's not all fun to be born.

Now the child has become more real. But it is not only the child that needs exercise.

How about a bicycle ride in the lovely autumn weather...?

and it doesn't exactly look like a human being yet. Although it has a heart that beats.

Tubor cellarium

Dimwit

Ventral anterior and lateral nuclei of the thalamus

Ignoramus

Wernekes area

Feeble stock

Spinal nucleus of the tri geminal complex
 Backwards.
 White matter

Eden has Jouberts syndrome of cerebellar vermis hypoplasia, Ventilation rhythm problems and several neurological complications. General delay but no clear decision yet about her intellectual function has been made although we assume it is better than is at present obvious.

Accurate assessment is maybe difficult at the start but is very important so that the child's parents are not encouraged to aim too high.

But these are only little humans and they don't stay that way, they grow all the time.
 And at length they will also grow up. Now what does that mean?
 These small feet can already kick, but only make small whirls in the surrounding water. The mother feels nothing.

Well they're a special unit on their own with err, err, with deformities.

Lets look at a normal child for comparison.
 Your brain.
 Well erm it's a person that's deformed...

Eden I was born with an underdeveloped cerebellum. I am missing my vermis.

Your brain.
 Here in the brain is the most puzzling tissue of all. It doesn't just relay a message. Its billions of interconnecting cells allow a person to think, quick as a wink, to hear flexible as an ear, to touch strong as an ox, to taste, green as a cabbage, to smell dirty as a fart.
 In spite of any jokes to the contrary you and your cells are unbelievably well organised.
 But what about our little girl?
 She is growing up too, in fact she grows up sooner than a boy of the same age.
 Her voice doesn't change and mercifully she doesn't grow hair on her chin.

Benji Ex mensa labore
 Mensa tablum exigency
 Cerebral ventricular anode
 Postula lidiculus posterior anode
 Ridiclissimus bellus
 Nauta et bena et tu ceasare

In the frontal lobes are located the motor areas controlling movements of the body and above all the organs of speech.

Eden frontal lobes

These centres perform the primary functions of the brain; perception and the control of acts or behaviour.

*Your brain is like a powerful computer that controls everything you do.
 It allows you to think, move, breathe and make sense of the world around you.
 It also stores information so that you can learn and remember things.
 Different parts of your brain do different jobs.
 Nerves carry information and instructions between your brain and the rest of your body.
 The cerebellum is the small rounded part of your brain that sticks out behind your brain stem.
 Its main job is to coordinate your movements, so they are smooth and accurate.
 It can do this without you having to think about it.*

His mother complains he is backwards.

The question that arises is, how far can this process go?

To what extent can the human brain be replaced by a collection of vacuum tubes and transistors?

Mans progress is largely a consequence of his wonderful restless imaginative brain, his ability to think intelligently in coping with the problems of his environment.

Another question is : What is the nature of this thought process? What is it that enters in to our heads? What do we mean by thinking, by ideas, by imagination?

If we can identify these processes perhaps we can be built into machines?

Motor nucleus of the trigeminal complex.

We look ahead with minds and cultures rooted in the ideas of more sluggish times.

The child has all the reflexes and automatic responses but he cannot respond to all stimuli he has to learn these responses : I scrape my hands to my face...I scrape my hands to my face.....I scrape my hands to my cheeks.....I scrape my hands to my cheeks.....

At the base of the skull lies the cerebellum. The cerebellum assists the cerebrum in coordinating complex muscular activities such as this: but the cerebellum does not originate the impulses that direct our muscular behaviour it simply transmits impulses that originate in other parts of the nervous system particularly in the Joubert's child the cerebellum is still underdeveloped.

Cerebral aqua duct.

Cerebral cortex

At the base of the skull lies the cerebellum, the cerebellum assists the cerebrum in coordinating complex muscular activities such as this:

Visual stimuli are received in the occipital lobes

Eden Occipital lobe

Sound stimuli are received in the temporal lobes

Eden Temporal lobe

Taste stimuli are received in the parietal lobes

Parietal lobes

Touch stimuli also go to these lobes.

Principal sensory nucleus of the trigeminal complex.

Dudley Hello? Oh this is Mr four ceps. Oh you're Mr five ceps are you? It doesn't matter what endeavour you engage with in this life, some one will always come and top you.

Perception is an intermediary step in information processing between sensation and cognition.

Eden I am the result of a genetic incompatibility between my parents: Papa seen here spinning as a state of the art image technique and my Mummy seen here in the bath.

This stimulates him to select an appropriate response.

This is conveyed back to the areas controlling body behaviour.

From these areas impulses are sent to the appropriate parts of the body and he responds.

Here memory comes into play : Humpty dumpty sat on the wall Humpty dumpty had a great fall, All the kings horses and all the king's men couldn't put humpty together again.

And drawing on the stored images of past experience he recognises that this is a car and understands the meaning conveyed by the car and the horn. But it still remains for him to make a response.

How is his mind working?

Keep driving it.

Danger there, clear there, an oncoming car no chance to drop back.

How is the motor like your body? It's made up of many different parts.

These send impulses back along the neurons to the areas of the cerebrum concerned with sight and hearing. This is the first station, the place where he actually sees and hears the car, but he does not yet recognise what it is.

These are the steps involved in every act of conscious behaviour, first reception of the stimulus, second recognition of its meaning, third interpretation and planning a response. Fourth direction of the response. The existence of these steps is revealed by what happens when any one of these areas of the cortex is injured or removed.

Science is the great antidote to the poison of enthusiasm and superstition.

It's a simple little examination which doesn't hurt.

You just lie quietly relaxed and its soon over.

Science is the systematic classification of experience. This is not science.

Perception is an intermediate step in information processing between sensation and cognition.

Eden My voice was a long time coming but today on my 10th birthday I speak with a new communication aid.

When humans used to eat the brains of their admired enemies to gain their cunning and wisdom they identified the right organ.

Andrew Enjoying the cooking?

Eden Yes

Andrew Does it smell good?

Eden Yes

Eden Onions make me cry but they smell happy when you cook them, they taste good when you eat them. Onions make me cry but they smell happy when you cook them, they taste good when you eat them.

And its food that makes you grow.

Eden Hello.

Taste stimuli are received in the parietal lobes.

Parietal lobes.

This is a drawing of a single neuron .The neuron is microscopically small .There can be thousands of individual connections to each one .The building blocks that make up the brain are extremely complex. It is less than one thousandth the length of a typical computer element. A transistor.Which typically only has a few connections leading in and out. It is less than one thousandth the length of a typical computer element.

Well err they're a special unit on their own with err with err deformities.

The hand is relatively useless. She doesn't grasp this pen. Most of us can write easily too. But what about those who have great difficulty writing? Or those who cant write at all.Life can be very frustrating if you have to ask for help just to write a letter. Or when it takes you hours to write just one page. It's a personal problem.

Like all human beings Pauline needs to communicate with others.

Most of us can speak easily, use the telephone without a second thought

In the frontal lobes are located the motor areas controlling the movement of the body and above all the organs of speech.

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FILM TRANSCRIPT

Eden Rise and shine and give god his glory glory.
Rise and shine and give god his glory glory.
Rise and shine and give god his glory glory, children of the lord.

Brain dead

Eden Hello Billie and Etta.

Art is the tree of life and science is the tree of death.

Eden Hello Billie and Etta

Andrew What colour was your buggy you were pushing?

Billie Blue and red and yellow.

Andrew And where were you going that day?

Billie To the post box.

Andrew Where was that?

Billie At the bottom of the drive in France .

Andrew And does Eden remember it?

Billie Yeah.

Andrew What was Eden doing?

Billie Pushing Etta.

Andrew And how do you think Eden sees the world?

Billie I don't know.

Andrew And now sing me you sing You are my sunshine and we'll stop.

Eden You are my sunshine my only...

Here the stored images of past experiences are projected into the future.

Eden Row row row your boat gently down the stream row row row your boat life is but a dream.

Andrew Do you remember that? You were singing.

And what colour was it?

Eden Yellow.

Eden [Sign] Yellow.

Andrew Did you have a life jacket on?

Eden Yeah.

Andrew And what colour was the life jacket?

Eden Yellow.

Andrew And you were singing in the canoe on the lake? Did that feel good?

Eden Yeah.

Look carefully for the small differences between colours. And now it's your turn to guess.

Try and describe the colours so well that she can guess what colour it is.

It reminds me of a guardsman's coat.

A fire engine.

A robin's red breast.

Scarlet

RED

Yes

All red flowers are not the same red.

Here we see the attempt to illustrate a congenital malformation of the brain. The cerebellum, the little brain, the heart of thinking, the heart of memory and attention, the heart of movement, the heart of posture and balance, the heart of motivation, the heart of appetite and feeding. And to think that this my heart of is lagging behind.

It is this complex interplay of chemical and physical events which underlies the rich tapestry of everyday experiences, the sights we see, the sounds we hear, the feelings we experience and the ideas we ponder. They have no imagination, they cannot create and invent and therefore they do not think in any real sense.

Eden Hello papa how are you?
Andrew Show me how you talk?
Eden Hello papa how are you? How are you today?
Eden Pardon me
Andrew Sorry did you say something?
Eden Pardon me. Pardon me.
Andrew What did you do
Eden I belched
Andrew You belched did you?
Eden Big
Andrew What's the most important bit of your body?
Eden Brain
Andrew That's right it's your brain. Your brains in the bath though isn't it?
Eden Yeah.
Andrew Does it work?
Eden Yeah.
Andrew Show me how you undo it? Oh no your brains fallen away.
It fell apart, it rolled down the hill.
It's next to your Barbie shoes.
Which one do you like the best, the Barbie shoes or the brain?
Eden Barbie.
Andrew The Barbie shoes? What you'd rather have the Barbie shoes than the brain?

So consequently we can't call them brains

I'm a Barbie girl in a Barbie world, it's fantastic, it's made of plastic..... etc.

If thoughts could be captured they might look something like this. If taste were e seen in action might it look like this? If sound were to be seen it could look like this. Images sound like this. Touch looks like this. Your brain.

Perhaps this is hard to believe so watch carefully. Watch carefully.

What would the world look like through the eyes of a bee?

The bushes have got mostly green and yellow, the top of the bushes are yellow and red.

To see my feet in a polarised light.

Visual stimuli are received in occipital lobes.

Eden Occipital lobes.

And according to Dodge as I have mentioned previously we know nothing of the incidence and significance of noises in the head of children.

Sound stimuli are received in the temporal lobes.

He holds his hand in a stiff attitude and his head droops. He shows little response but he can watch something. He has got what might be described as an over expressive face. Let's watch this again : at rest he is quiet. He sticks out his tongue as though it is too big for his mouth. You often see this in spastics.

Eden Hello how are you

Mirror, mirror on the wall, how do I know that it is myself in the mirror?

Here the stored images of past experiences are projected into the future.

Also a time may come when we will understand the complexities of the human brain. The roads to such understanding are long but they are fascinating and tremendously challenging.

If someone had saved your shoes from the time you were a baby, they might look something like this.

You grew and grew.

Most important for human beings is the erect position. Because the body has weight it has a tendency to fall. The feet play an important part in posture and in movement. They have to bear the weight of the body and must be strong and flexible. The weight of the body is born by the heels and the balls of the toes. The foot is arched between these points.

Eden Here I am locked into the castle of my senses: seeing, listening, smelling, touching, tasting.
Eden Here I am locked into the castle of my senses: seeing, listening, smelling, touching, tasting.
Eden You make me happy when skies are grey. Hello
Andrew You didn't like the castle?
Eden No. It hurt me much.
Andrew It hurt you? Did it hurt a lot?
Eden Yes.
Leila Are You ok now?
Eden No it hurts
Leila Which bit hurt? These. Your feet ?
Eden Yes.
Andrew Was it hard?
Eden Yes.
Andrew Was it very hard?
Eden Yes.
Andrew Would you like to do it again?
Eden No
Andrew Never? How much did it hurt?
Eden Big hurt.
Andrew What, it really hurt?
Eden Yes both feet.
Andrew Well I'm sorry about that.

We do not expect that she will ever be able to walk independently but we aim to maintain her present mobility and hope to produce some improvement in her sitting and standing postures.

It's a personal problem and that means it's a problem for society.

And this is not the end but only the barest beginning. It would perhaps be more accurate to say this is the beginning.

Leila Eden I hope you're not doing anything naughty?
Eden No

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