My abstract may have been a bit misleading – I'm not really doing a history of ideas tour – do fill in more names, as and when. [slide 2]

So, mainly, i use the word "interest" in a way that fits with its very wide range of ordinary meanings, ie more as a natural than a scientific term - but this talk is partly meant to show how maths can give that a different spin. [slide 3] "Interests" range from fleeting moments to lasting passions, from narrow fixations and self-seeking plots, to duties and universal concerns; and communities of interest can extend from family and friends, teams, gangs, brands and nations with long histories, to casual folk at bus stops; and from mutual aid to the self-seeking vested interests of corporations and their actors, and the bureaucratic interests of the state. Interests prepare us for action and for interaction. Though this is mainly about humans, all living things have survival interests and action rationality

An ecological model of interests was developed by Mike Lesser and myself in the 90s, based on my (1986) PhD. It was intended to bring mathematical rigour to this folkish psychology. [slides 4,5] It is a general model, not focussed on autism in particular, and it nicely parallels recent predictive coding (Friston graphics brain) in being an embodied generative model with energy/attention conservation and dynamic mutability built in, and thus an active exploratory character emerges, probing possibilities in an environment [Slides 6,7]

Since Kanner first described autism, distinctive interests have featured in its description. We proposed that these impressive autistic interests follow from attention distribution that can be roughly summed up as more to the current interest, less to orthogonal ones. The flow will be stronger. If attracted, the attraction is super powerful, if repelled, that's powerful too. Generally, more forceful output and input will both occur in autism, alternating with their virtual absence.

To get a bit technical: There is a dynamic and variable scarce processing resource which operates within semi segregated subsets of interests with specific weighted dimensions, ie they are _informed_. They may be nested or have any degree of overlap, within an n-dimensional matrix in which structured complexity emerges.

No sphere of resource activity is a closed system; the overall resource is replenished as it is spent; some activities are self replenishing; internal activations may create new gradients and new resource distribution. Thus output cannot be fully predicted from input. [cf Friston Graphics paper]

You can't dip in the same river twice... yet we strive to stay balanced, we yearn for the comfort of stability.

 Kahneman won a Nobel prize for his work with Tversky, summed up as Thinking Fast – System 1, – and Thinking Slow, System 2, which also has parallels with our work, though I redefine them in terms of interests and the output of interests.

I think System 1 with its rapid selective availability cascades is what I've described as an interest system.   A bit like a digestive system, it takes in meaning, breaks it down, and shunts off the bits to varied parts: as such it shows action rationality rather than system rationality (Habermas).   I suggest that an interest system's content is informed movement with semi segregated flow directives with _Real World opportunities at their output_ end, which may be in the Real World or in system 2 where they are expressed in time and are quasi sensory. In my thesis I called this "cognitive space" and "playground of the imagination". Until these are _expressed_ they cannot be examined or evaluated.

 Expression of an interest is an activity that has a presence in space

time. It must shed most dimensions to achieve this, this shedding is identical with the push towards action and constrained direction. Hence until the emergence into expression, form and content are indistinguishable. Significantly more energy goes into expression than is needed for the virtually instant System 1 connections.

¥   Therefore, force or real energy imbues all meaning, and all expression sends real energy out into the world where it may reach and impact on other interest systems.
¥   We are talking about power
¥   It is the power that pushes movement into becoming
¥   It is power that other creatures can feel and can be changed by

We each have this power, and are vulnerable to it.

To return to the over all model. I'm suggesting that System 2 is output from System 1, which allows some checking to happen: this output can be thought of as projection from current informed interest boundaries, into a pretend world of space time, in which it can be evaluated.
We can use internal feedback loops between these systems to re-visit possibilities and questions, as by the time System 2 events have occurred and become input in turn, they feedback into an interest system altered by new ripples of activation. Also, by singling out and perceptibly associating certain dimensions (either in the Real World or via System 2 expression) those dimensions will have a more potent impact on System 1 as exterior to it than as part of it.

Within this wildly varying array of prior interests and concerns, language and speech are tools for creating apparent order and for manipulating interest systems [slide 8]. Language creates an illusory synonymy of meanings, as everyone's clearcut semantics is leaked into by individual concerns with different histories and priorities. Thus when we speak it has a wide and unpredictable range of meanings only

partly overlapping with the meanings we thought we had expressed. So, it's actually an <u>infinite</u> empathy problem, not just a double one.

The potential for misalignment and mutual misunderstanding is enormous. [slides 9,10,11]. Shared language seems to offer a reliable and unchanging matrix of connection – which we yearn for. Yet in practice, the counter flow of resulting interactions can be catastrophic. Luckily - sometimes the opposite happens: both alignment and misalignment can have powerful effects. [slide 12]

<u>All **communities** of interest</u> are interest systems that emerge from an overlap of direction and engagement with other semi-autonomous embodied beings, not necessarily human. Common interests create communities of practice, which may or may not have some <u>shared stability</u> (reliability, predictability) or a history with cultural weight.

Communities of interest vary across the same dimensions as individual interest systems do but add mutual guesswork and the potential for joined forces. Sometimes the deployment of joined forces is <u>not</u> a good thing: think armies and corporations.

Language seems a perfect tool for sharing and considering information within communities of interest, but it creates illusions at many levels and disguises its own activities of excluding dimensions, falsely appearing to be precise, playing on arousal levels, and causing harmonies and dissonances in interaction. It is a power tool for manipulating interest systems, that can be and is used to pursue hidden ends. [slide 10]

Distorted information flows create real vulnerabilities within interest systems of any scope.

Watch out! Not only are <u>you</u> being manipulated even by these very words as i speak - and when <u>you</u> speak that is also what <u>you</u> are doing (and sometimes doing to yourself) – <u>so long as your voice can be heard.</u>

Being known to know a language creates channels of energy exchange with unpredictable impact. (exceptions: nursery rhymes, chanting, singing, churches...).   These unpredictable power shifting features I believe play in to the lost use of speech which occurs more often in <u>autistic</u> young people than in others, and can take its toll on personal efficacy. Learning how to make the power go both ways is a key life skill.

Language is both limited and imperfect yet potent. As you grow up, if you can't use language effectively to hold and change other people's interests, your chances of being treated as an equal rapidly dwindle. You will have less nuanced and less effective powers of getting others to meet your needs.

Yet being autistically less influenced by others' thoughts and views can be a true strength, so when even the smallest person wields the tool of language with precision within the interest systems they engage with, there is potential to create truth based change of any scope. Common interests can shine out and maybe individuals can sometimes weigh in to tilt the gradients by speaking truth to power, and showing even corporate actors that their interests are part of a larger whole? [slide 13]

We are all on or near the edge of a massively growing precariat. The communities of interest in which <u>we</u> - and in fact probably all humans - most happily function are not dominated by profit motives, or glamour, they are not structured into hierarchies, and they do not breed a climate of fear. We must find scope to build on our egalitarian and universalist principles to create real cooperative communities of

interest and practice. The community of interest we share with all living things is what matters most.

Long live demand avoidance!

Slide 14 has acknowledgements