Brain Sex

Difficulties in communication between the sexes - are they due to fundamental gender based differences in the way we process information?
Do you find that women understand women better than men and vice versa and if so could this be due to gender specific mental representational systems which, between the sexes, are at best parallel and at worst antagonistic?

For many years we have had evidence of quantifiable behaviour differences between the sexes but now researchers are linking those differences to sex based differences in the development and use of the brain.
In 1979 Diane McGuiness and Karl Pribram reported that men
"have better daylight vision than women. They have faster reaction times from mid-childhood on; even as infants, they tend to be more interested in objects than in people, and are more skilled at gross motor movements. Men excel in a wide range of skills involving the perception of depth in space, an ability which gives them an edge in mechanical tasks.
and that women
"have more sensitive taste, are more sensitive to touch, have better hearing, are less tolerant of loud volumes or repetitive sounds and have better night vision than men. From infancy on, women excel in many verbal skills, are better in manual dexterity and fine co-ordination, and process information faster, particularly in tasks that require rapid choices. They are less distracted by sights while listening, more accurately perceive "subliminal" messages, and are better at remembering the names and faces of old high-school classmates.

More recent research by Diane McGuiness (Professor of Psychology - University of South Florida) has shown that
"..the average girl learns coherent speech as much as a year before the average boy and in reading and writing as well girls have a lifelong advantage in fluency. Girls have better hearing skills from birth than boys and tend to read and spell by sound, boys are more likely to rely on sight which seems to be a less successful strategy ."

Of course the use of visual strategies is not always a disadvantage and it appears to be the basis for the greater ability in maths found in boys. Camilla Benbow (Professor of Psychology - Iowa State University) reports: "What we have discovered by studying well over one million kids over twenty years is that there are many more maths talented boys than girls." This difference is most pronounced at the highest level of ability where "in the top 1 in 10000 in mathematical reasoning ability there are 13 boys for every girl."

A strong preference for either the internal verbal or visual mode of processing may well also be the basis of much learning disability in children and certainly contributes to the ease or difficulty of learning to read according to Dr Bob Zenhausern (Professor of Psychology - St Johns University, New York). He has confirmed the relationship of thinking strategies to reading difficulty. In the study of hundreds of American children classified as "learning disabled" he discovered the following:

- most of these *learning* disabled children were in fact *reading* disabled
- most of these children were boys
- and most of these children (85%) had a preference for the use of visual strategies to learn to read.

These predominantly male, visual strategists with reading difficulties, he classified as “phonetically disabled”. He found that for them the use of a phonetic strategy (sounding out words, verbal word attack) actually caused a deterioration in their reading ability and the only way they could make progress was through a reading strategy which required no reading out loud at all.
This strategy he calls the DART method (Direct Access Reading Technique) for it uses direct connections between the look of a word and its meaning to build up the basis of reading and uses no verbalisation at all.
This technique has proved very successful with the reading disabled from young children up to adults and has been particularly successful with those children for whom no other technique seems to work.

This strong difference in preference for visual or verbal mental processing style appears to be related to differences between the sexes in the use of the brain. This is revealed by the latest brainscan technology which produces neuro-images of brain activity related to blood flow through the brain. Reuben Gur (Professor of Psychiatry - University of Pennsylvania) has found that men and women not only use different parts of their brains to tackle the same thinking task but that they also use different amounts of grey matter for the same problem - “the amount of (brain) activity in resting women is as much as the brain activity in men who are working on problems.”
It would appear that women in all situations are using much more of their brain than men and this seems to relate back to the development of superior verbal skills in women.

Dr Michael O’Boyle (Associate Professor of Psychology - Iowa State University) states “the superior language abilities that seem to characterise females may be related to bilateral, that is both sides of the brain, acquiring language abilities. In this development of additional linguistic abilities however there maybe a price to be paid, in that brain areas that might have been used to develop spatial abilities may be used up or engaged with these additional verbal capabilities.”

So how is your thinking style characterised? Do you tend, in your own mind, to represent information visually or verbally? When you seek an elusive memory are you seeking a picture or a sound?
Do you have a “typically male” or “typically female” brain or do you use a mixture of verbal and visual strategies?

Try this simple test:

VERBAL/VISUAL PREFERENCE TEST

Indicate your choice by assigning a number from 1 to 10 (with one being the least and 10 being the most) for each question.

1) do you recognise peoples voices when you first hear them on the phone?
2) when on the phone do you “see” (in your minds eye) the person you are talking to?
3) can you “hear” (in your minds ear) the sound of your father or mother’s voice?
4) can you “see” your mother or fathers face?
5) how easy do you find it to follow the plot on foreign movies with sub-titles?
6) can you follow the plot on TV with the sound off?
7) how well do you remember peoples names?
8) how well do you remember peoples faces?
9) how often do you experience internal dialogue (talking to yourself)?
10) how vivid are your daydreams?
11) how easy do you find it to make puns or plays on words humorously?
12) how much do you enjoy sight gags - eg Mr Bean?

When thinking of you favourite TV commercial at present
how well can you remember
13) the words, lyrics, slogans?
14) the visual images?

When looking through a book of photographs do you
15) read all the captions?
16) focus mostly on the pictures?

When you are anticipating a conflict situation arising with someone, how much do you
17) verbally rehearse the possible conversation?
18) visually imagine the scene and what might happen?

When following directions given by someone else
how easy do you find it to follow
19) verbal instructions
20) a drawn map

To score the test:

Add all the scores for the even numbered questions together
this is your Visual Score
Add all the scores for the odd numbered questions together
this is your Verbal Score
Subtract the two scores and divide by 10.
The larger number shows the predominant preference and the greater the difference the larger the preference.
A figure of 2.0 or more could be considered to be a significant preference.

A significant preference for a Visual or a Verbal style will show itself in the internal patterning system that you use to make sense of the world and in the way you transmit your understandings to others.
If you have important new information to consider how do you process it? Most people will use reading the printed word whether in hardcopy or on screen as their primary input mode. This process for you may be:
1) sounding out every individual word to yourself in a continual stream
2) only having the key words resounding as auditory internal dialogue, or
3) creating a succession of image impressions with little or no internal dialogue.

No matter what your preference for input mode it does seem that we all go back to ponderous auditory repetition of words if we get stuck until we can comprehend what we have read.

Simultaneously and subsequently we are processing this new information to build links between our present knowledge and our new knowledge as we seek to achieve a greater understanding of our world. This processing involves building internal sensory metaphors consistent with our present representations of information. These sensory metaphors can involve internal pictures, sounds, emotions, sensations of touch, taste and smell. Just take a moment to pull up a distant but rich memory - say the last excellent party you went to - see how many ways that information is represented in your mind. Did you find available data in all sensory modes or did you have a distinct preference?
One way to get some hints into representational systems is to listen carefully for the metaphoric preference used in verbal communication. A person with a strong sensory preference will tend to use the related metaphorical structures in their everyday language.
Visual: ”I see what you mean, I get the picture, its all clear”
Verbal: “it’s as clear as a bell, I hear what you’re saying, loud and clear”

Of course there are also metaphorical structures corresponding to our other sensory systems as well and these are found in language as:
Gustatory: “bad taste, spit it out, chew it over, sweet as”
Olfactory: “something fishy, faint whiff, that stinks, smelling of roses”
Tactile: “get a handle on, firm foundation, get in touch with, hang in there”
Affective: “ passionate about it, I just love it, despise the colour”

The communication problem arises when you have two people with strong, but different, representational systems trying to get the other to see their point of view. They each try to represent their opinion as clearly and simply as possible using all their metaphoric language power but just seem to understand each other less and less. They only start to make progress when they try representing their views in the metaphors of the other. Suddenly they go from divergent paths to convergent paths and good communication is established.
This simple solution is of course the most unlikely because for each party it represents the most foreign way to process information and so takes the greatest empathy and effort.
How many of the relationship difficulties between the sexes are due purely to the use of different - and in some ways antagonistic - mental representational systems?