Outline and evaluate one 'early selection theory' (Broadbent or Treisman) and one 'late selection theory' (Deutsch) in focused attention.

One early explanation of focused attention was put forward by Broadbent. He devised a model explaining that two mess ages are sent to two channels, these are being the ears that represent two separate channels. Both messages are sent to the sensory buffer store. This is only a short time before the information is lost. One of the messages which have been attended goes through on the basis of physical characteristics through the filter. A channel has been selected and the bottleneck which the filter is often seen as, occurs here. The filter stops the overload of info rmation piling on the attentional system. According to Broadbent these channels cannot be switched. The unattended message is left in the sensory buffer store and is completely lost.

Key research was conducted by Broadbent on the filter model of attention. His split-span procedure involved participants having t o recall digits presented to them in each ear simultaneously. It was seen that ear by ear reports were more accurate. Broadbent stated that the ears operate on separate channels which can only be attended serially. Cherry conducted a few studies into the cocktail party effect where everyone has the ability to follow just one conversation when there are many other ones going on at the same time nearby. Participants had to undergo a dichotic listening task. Cherry found that people could not recall that much from the unattended ear. This means they could not recall any words. They were unaware of the language change during the task. There were physical characteristics that were recognised such as change in volume, pitch and sex of the speaker. One advantage of this approach was that it can be experimentally tested. Also this model could explain Cherry's findings in that the non shadowed messages were not allowed to pass through the filter.

However there are studies producing inconsistent data according to Broadbent's theory. According to Broadbent, the unattended messages cannot be recalled in terms of the meaning. Our attention may sometimes switch when we here our name in a nearby conversation. This was experimentally conducted by Moray who found that the no n attended ear may switch to the attended ear. This shows that there could be semantic analysis on the unattended channel. The model has also been criticised for no specific definition of a channel. Another study against Broadbent was put forward by Gray and Wedderburn. They showed that the ears do not work as separate information channels.

Further research against Broadbent was conducted by Treisman. She found that meaningful information presented in the attended ear could be switched mid-sentence to the non attended ear a nd participants would then change their focus to the unattended ear and shadow as much as they can. She also did a study where she presented English text to one ear and French text into the other ear. She asked them to shadow the English text. She made both texts exactly the same meaning. Some participants however, did realise this and shows that some information can be analysed through the non attended channel semantically.

In contrast, one late theory of focussed attention was put forwa rd by Deutsch. He rejected the Broadbent's theory that information is filtered out

early. He argued that all stimuli are fully analysed with the most important or relevant stimulus determining the response. This theory places the bottleneck in the processing much nearer the response end of the information processing system. According to Deutsch there is a complete analysis of all stimuli and only important inputs lead to responses.

There is experimental support for this theory by Lewis. He showed that it will take longer to recall a word on the attended ear if a semantically related word was heard simultaneously on the other ear. This suggests that unconscious semantic processing on the non shadowed input slowed down the processing of the shadowed words.

In spite of this, the theory has been criticised for methodological difficulties. This theory relates to the unconscious processing which is hard to evaluate.

Further more, Treisman has challenged the late selection theory. According to Deutsch's theory, participants should be able to identify many target words both in the shadowed and non shadowed messages since the theory claims that both are analysed for meaning. Research that is against this was shown by Treisman and Geffen. They tested this and found th at participants recalled much more words in the attended channel than the non attended channel.

On the other hand, there is further experimental support for Deutsch's theory. Corteen and Wood used galvanic sk in responses when ever participants heard a part icular target word. It also produced a galvanic skin response when the word was presented to the non attended ear. This supports Deutsch in that the unconscious processing on the non -attended channel could also involve generalization.

However, there is an alternative explanation so single channel theories of focused auditory attention. The major criticism of the single channel theories is their lack of fle xibility. Heinze and Johnston state that depending on the demands of the task, attentional selectivity can occur at several different stages. According to their findings they concluded that the extent of processing and the point at which selection takes place is dependant on the task difficulty.