Introduction

A young lady was referred to me for an assessment because she was doing poorly in some college courses. She reported that she suffered from test anxiety, but when I completed the assessment, I found that she had what I call a right/left discrimination problem. This young lady found herself becoming more and more frustrated by her difficulties with multiple choice tests and with social interactions. She was doing well in her courses, understood the material, participated, and was able to complete assignments. However, she failed every multiple-choice test she took. Socially friends were calling her less because she would drive them crazy with her indecisiveness of things like where to go, what to do and what to buy.

Another woman came in for an assessment because she thought she was losing her memory. She had forgotten which way to turn out of her driveway to go to the store. She also had a problem with right/left confusion and was unable to remember how to get to the store because someone had cut down the tree at the end of the block that she used as a landmark. Without the landmark she could not remember which way to turn.

A student enrolled at a university was having difficulty with certain
courses. During the assessment I asked him if he was ever fired from a job. He reported once. He was working a summer job at the customer service department of a large store. His task was to take returned merchandise out of the packaging, place it on a conveyor belt and shred the packing material. The third time he reversed the procedure, shredding the merchandise; he was fired.

What is a right/left discrimination problem? I define a right/left discrimination problem as a thought process that results in confusion when processing or communicating anything that has an “either/or” relationship. The three areas in which I have observed this phenomenon are spatial relations, language and quantity. The right/left discrimination thought process causes reversals, memory problems, and confusion.

Reversals are not perception problems but rather processing and communication problems. The person who reads a “b” instead of a “d” does not see a “b”. The individual sees a “d”, just like everyone else, but because of the right/left problem, this person does not know whether it is a “b” or a “d”. This is easier to understand if we start by looking at young children who confuse their right and left. Many of these children will put their shoes on the wrong feet, confuse their right and left sides and write numbers and letters backwards. These are all reversals and each of them involves the same confusion. Either this shoe goes on this foot or the other, this is either my right or left side and I write this number or letter by going to the right or to the left.

Confusion is caused by this thought process because the person
continually focuses on the ‘either/or’ possibilities rather than approaching the problem or idea from a different direction. Take the b/d example again. The individual who is not sure if a letter is a “b” or a “d” continues to decide if the letter in question is a “b” or a “d” instead of using a motor memory of writing the letter, or thinking of another word which begins with the same letter shape, or using some memory clue to remember which one is which. The more the person tries to distinguish between one and the other, the more confused the person becomes. The end result is either frustration or a guess. If the person guesses incorrectly, an error is made frequently without the individual being aware that it is an error. If the person guesses correctly, it does not mean that any learning has taken place because the next time the same task is encountered, the student will find him/herself in the same quandary. Only when the student is sure that the dilemma of the “either/or” is solved with the correct answer does learning take place. If this is not reinforced quickly and frequently, the item learned will fade back into the confusion of “either/or”. This is how it affects memory. It is not uncommon for a student to appear to learn something and use it for a short period of time and later appear as if the item was never learned. For example, a student guesses that a number is even, when it is odd. If the student is corrected, he/she may be able to remember for the rest of the period or day that the number is odd, but the next day this same student will guess again because no learning took place. As long as the person is not able to distinguish between the “either/or” aspects of what is being learned, no learning takes place and although the correct information may reside in the short term memory, it does not get moved to long term memory.
The right/left discrimination problem causes reversals, and since reversals are the most visible type of reading and writing problems, they have become directly associated with the term dyslexia. Although many students with severe reading problems do manifest reversals, not all students with such problems make reversals and making reversals does not mean a reading problem. There are many individuals with a right/left discrimination problem who reverse many things but not letters and words and are excellent readers. Their reversals may come out in spatial relationships or with numbers.

As stated above, many, if not all, children during their development confuse right and left. However, for most of them, it does not take long before they are able to remember the right and left side of their bodies and do not have difficulty remembering which way to form letters and numbers. It seems as if this natural developmental process is delayed, or non-existent, for individuals who have problems with right/left discrimination. Many children who exhibit problems with reversals seem to outgrow them. This is why it was believed that children outgrew learning disabilities. When the reversals faded, it was assumed that the problem was corrected. However, this is not the case because the same thought process, right/left discrimination, which caused the reversal of the writing of a number, later makes it difficult for the person to distinguish between “subjective” and “objective” and other terms with have an “either/or” relationship. Other terms which have such a relationship and are confused, or reversed, are “defense” and “offense”; “inductive” and
“deductive reasoning”, “greater than” and “less than”, “clockwise” and “counterclockwise”. So the obvious reversals in reading and writing are replaced with the less obvious confusion in vocabulary and concepts. Children therefore do not outgrow this thought process, but rather it matures with them into adulthood.

The confusion about odd and even numbers is a good example of a right/left problem that affects skills at a higher level. Many teachers are not concerned that a child cannot remember odd and even numbers. They do not think it is important enough to worry about. However, without the concept of odd and even, many children and adults do not see the patterns in math. Additionally, because they do not know that the addition and subtraction of likes result in an even number, these students are not able to check their work with this pattern. They are stuck guessing, and when you guess the only way to check your answer is to guess again.

Some Solutions to the Problems
Caused by Right/left Discrimination

The first and most important thing that a person who has a right/left discrimination problem must do is to understand it. The person who makes reversals or has difficulty learning items that are similar usually believes that it is due to a low intelligence or to put it in a crass way, “because I am stupid.” This belief lowers the persons self-esteem and leads to patterns of avoidance because “why should I try if I am so stupid”. When an individual comes to understand that reversals and right/left confusion is a thought process that is both positive and negative, the self-image can be modified from stupid to different. Coming to understand that
the different thought processes caused by a right/left, discrimination problem allows a person to more easily see both sides of an issue, enhances creativity and enables a person to be more tolerant of others with differences. This allows the person, who previously felt stupid and helpless, to feel adequate and in control.

The second step in dealing with right/left discrimination differences is to learn techniques that remove the “either/or” dilemma or provide a way to remember the difference. One such technique is weighted learning. This technique for learning and remembering involves learning one side of an “either/or” rather than both. With odd and even numbers, the person only learns the even numbers of 2, 4, 6, 8 and 0. When a number is not one of these, then the number is odd. You weight the “t” in “witch” to differentiate it from “which”.

The use of mnemonics is another technique for dealing with the right/left discrimination problem. There are commonly known mnemonics, and there are those which are custom made to help the individual to learn and remember things which are confusing. Mnemonics that are used in conjunction with weighted learning are most effective. These memory aids should not be created to help remember both parts of an “either/or” since this leads to the confusion of the memory aids.

Another technique for helping a person break the confusion caused by “either/or” is that of prioritizing. This is particularly effective for decision-making. Many people who have right/left problems find it
difficult to make up their minds, especially on simple things such as shopping for necessities. A trip to the store can be an agonizing experience, not only for the person with the problem but also for those who accompany that person. Take for example Mary who could not make up her mind about which kind of bread to buy. She would find herself spending many minutes trying to decide if she should buy white or wheat bread, this brand or that, the cheap or expensive brand, the regular size loaf or king size. By learning to prioritize ahead of time, Mary learned to choose a loaf of bread quickly and easily. She decided that cost was her first concern, then wheat was her preference and finally she would always by the larger loaf when it was available.

Some students are able to use conceptualizing and associating as a way to reduce the right/left confusion and increase memory. Using the example of odd and even numbers again, we can see that if a person is able to understand that even numbers are pairs, then numbers which do not represent a pair are odd.

Repetition sometimes can reduce the number of reversals and confusions. However, stress, fatigue, pressure and anxiety will exacerbate the right/left confusion, reducing any gain obtained by repetition.

Learning items in a series instead of in pairs is another technique for reducing the confusion caused by the right/left discrimination problem.