Case Two. In the second case, we are assuming that the pilot has, for some time, been carrying out a steady turn to the right. Because the turn is steady and balanced, there is no movement of fluid in the **semi-circular canals** and the hairs have erected themselves. This gives the pilot who lacks visual information the erroneous feeling that he is straight and level *(see Figure 6.9, below)*.

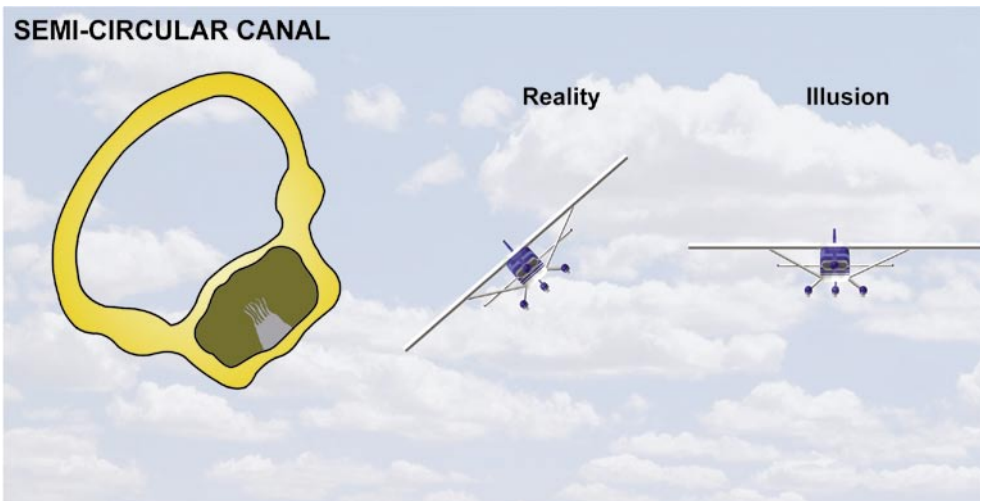

Figure 6.9.

As the pilot exits the turn by rolling to the left to regain straight and level flight, the fluid and the hairs move, giving a false impression of entering a turn to the left when, in fact, the wings are level.

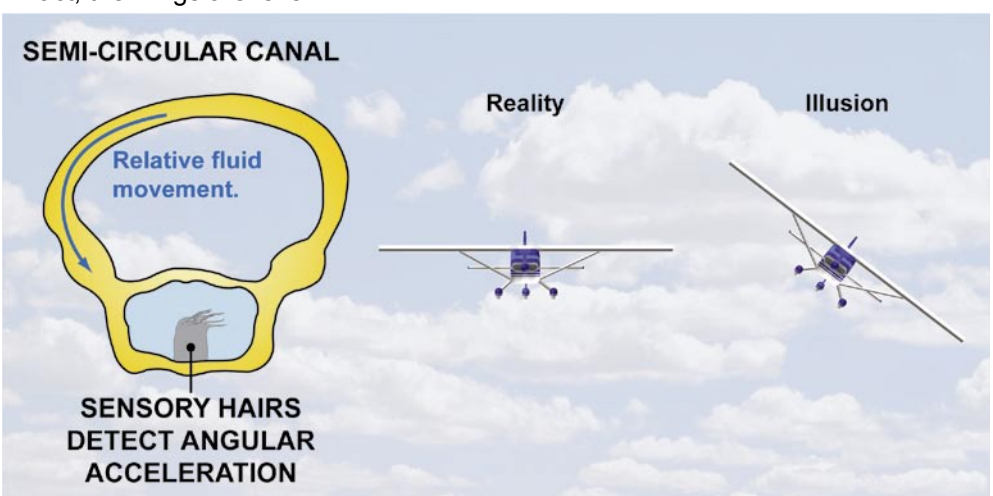

Figure 6.10.

In Case One and Case Two, the pilot will be subjected to two conflicting signals. His **visual sense** will tell him one thing, whereas his **vestibular apparatus** will tell him another. This conflict between **vestibular apparatus** and **visual sensory inputs** is the primary cause of spatial disorientation, and indeed, of motion sickness. Of course, for a healthy, fully-trained pilot, the visual signals will dominate and he is hardly likely to become disorientated. But a passenger or new student pilot may experience spatial disorientation.

If a pilot becomes aware that he is spatially disorientated, he must look out at the visual horizon if in VMC, or, if in IMC, trust his instruments.

As a pilot, you must remember to respect, at all times, the cardinal rule that if you suspect you are suffering from disorientation, you must concentrate on and believe the aircraft's instruments, or the external horizon.