expressions, gestures, posture, etc.). Subtracting the 7% for actual vocal content leaves one with the 93% statistic". Carroll explained.

"However, studying human behaviour is a challenging task. The inherent flaws of social scientific research methodology combined with the incredible dynamic nature of human behaviour make this specific quantification close to impossible. The fact of the matter is that the exact number is not that important", Carroll stresses.

'TO AVOID BEING A VICTIM'

"The important part is that most communication is nonverbal. In fact, nonverbal behaviour is the most crucial aspect and should be observed to avoid being a victim of assault. When we researched muggings, we noted that all victims had a similar (and many times exact) posture, gait and movement", Carroll added

During his extensive research, Carroll discovered two New York, USAbased psychologists, Betty Grayson and Morris Stein, who had carried out similar research in the 1980s. Grayson and Stein filmed people on a busy street then showed this footage to inmates at a local prison.

The inmates who were interviewed had been convicted for crimes on strangers, ranging from muggings to murder. The inmates were asked to choose whom they'd pick out as an easy target. The majority of the convicts pointed toward the same people as 'easy targets"'.

'LIST OF EASY TARGETS'

"It's really interesting that Grayson and Stein also noted that the elderly and women were high on the list of easy targets", Carroll said. "However, they also observed that young males in there 20s — often considered as a 'hard target' — were also selected in the 'easy target' group. A sad reality is that the criminal, like most predators, will always seek out the weak and insecure".

GREYSON AND STEIN RATED THE MOVEMENTS OF PEOPLE IDENTIFIED AS VICTIMS AS SLIGHTLY LESS COORDINATED THAN THOSE OF NON-VICTIMS'

As Carroll continued his study, he came across more research Greyson and Stein had conducted. This was based around the Laban Movement Analysis, a system used by dancers, actors (and now Hard Target Self-Defence instructors) to describe and record human movement in detail".

"Greyson and Stein rated the movements of people identified as victims as slightly less coordinated than those of non-victims", Carroll said. "The study allowed the researchers to get a better understanding as to why, and how, victims are selected. The initial study (shown to the inmates) results were influenced by other factors, such as the person's clothes or jewellery".

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Some 20 years after the Grayson and Stein study, another research group led by Lucy Johnston of the University of Canterbury, in New Zealand conducted a more definitive test of the idea, Point Light Walker Research. (Point light walkers are coordinated moving dots that simulate biological motion in which each dot represents specific joints of a human performing an action).

Johnston's study involved the use of a point light walker. This was a recording of a person made by attaching lights or reflective markers to their joints while they wear a black body suit. When played back you can see pure movement shown in the way their joints move, without being able to see any of their features or even the limbs that connect their joints.

"Research with point light walkers has shown that we can read characteristics from joint motion, such as gender or mood", Carroll said. "Using this technique, the researchers showed that even when all other information was removed, some individuals still get picked out as more likely to be victims of assault than others, meaning these judgements must be based on how they move".



ABOVE: the reception area at the Hard Target Self-Defence Academy in Turvey, North County Dublin.

'REALLY INTERESTING BIT'

Carroll went on to explains that the researchers were then asked if it is possible to change the way people walk to avoid being a possible victim? "Now, here's the really interesting bit", he added. "A group of volunteers were filmed walking before and after doing a short self-defence course".

"Using the point light technique, their walking styles were rated by volunteers (not prisoners) for vulnerability. The self-defence training they undertook didn't affect the walkers' ratings. Sadly, the majority of self-defence classes and courses we have witnessed have never demonstrated the importance of walking correctly".

"Those who train in our Hard Target Self-Defence Systems will know why we continue to drill the importance of a confident gait and posture", Carroll added. "In a second experiment, recruits were given training in how to walk, specifically focusing on the aspects which the researchers knew affected how vulnerable they appeared: factors affecting the synchrony and energy of their movement".

"This led to a significant drop in all the recruits' vulnerability ratings, which was still in place when they were re-tested a month later", Carroll con-



ABOVE: after a training seminar, Hard Target Self-Defence Academy chief instructor Aidan Carroll with firefighters from the Dolphin's Barn Fire Station in Dublin.

- For more information on the Hard Target Self-Defence Academy in North County Dublin and details of their forthcominfo@hardtargetselfdefence.com
- Visit: www.hardtargetselfdefence.com