Tree tactics in fencing: elite men's epee

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Introduction

Many fencing masters structure their training lessons according to tactical thinking processes designed by the Hungarian master Szabó (1977). The aim of this study is to devise a tree structure of tactical actions and their effectiveness in elite men's epee.

Methods

This was done using an observational methodology based on an open and systematic process of non-participant observation with a nomothetic, punctual, multidimensional design (Anguera et al., 2011). The tactic structure was drawn from the analysis of the fencing phrases following Szabó's tactical levels model. 29 male epee combats were recorded during two World Championships (2013-14). The observation instrument used was an adaptation of the ESGRIMOBS (Tarragó et al. 2015). The actions were recorded and coded using LINCE v.1.1 (Gabin et al., 2012) software. This analysis was focused on the actions and reactions of each fencer and his opponent during each exchange.

Results

Analysis of 39 fencing phrases whose frequency was equal or greater than 2 (n = 1,301). The largest number of actions ended at tactical level II (n = 746), III (n = 214) and IV (n = 307). Up to 40% of the actions ended in a touch. Table 1 shows the tree tactics in elite fencing. The distribution of tactical interaction and the efficacy values can be assessed in relation to the fencer who initiates the action (fencer "A") on his opponent (fencer "B"). 17.1% of the actions end up favoring fencer "A", whilst 15.1% favour the opponent (fencer "B") and 8% end in a double touch. The most common action in elite male epee (n = 356) is level II (offensive "A" and counteroffensive "B").

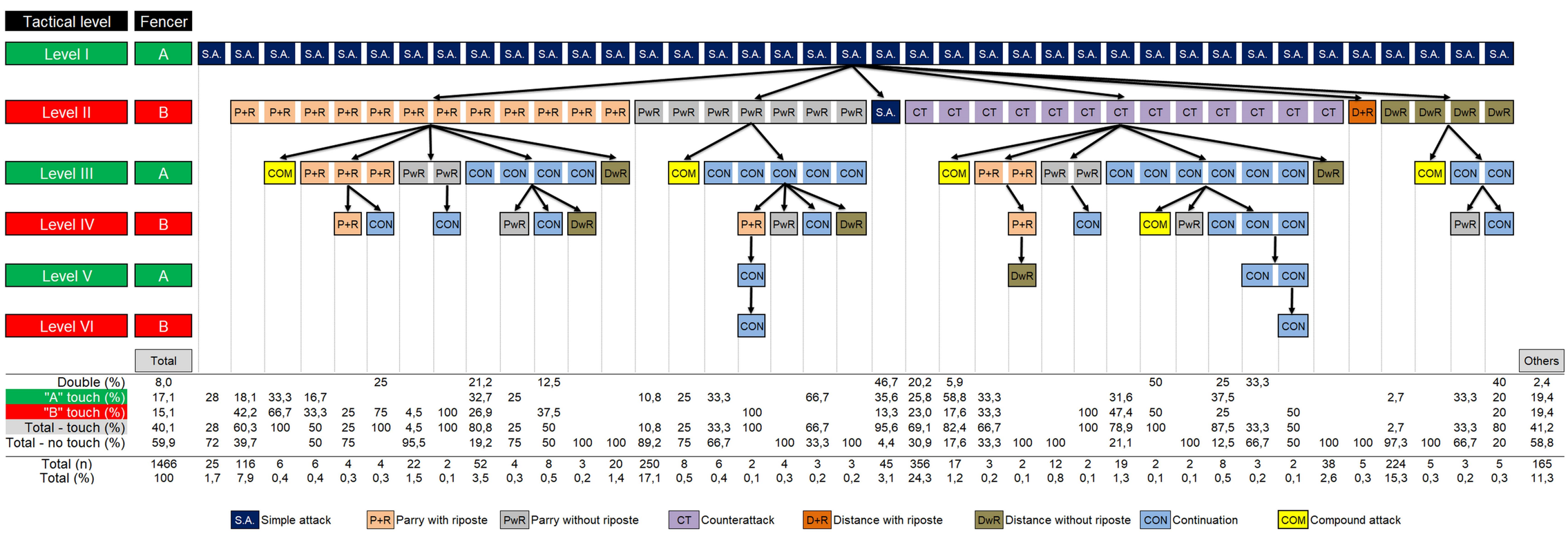

Figure 1: The tree tactics in fencing resulting from the analysis of male épée fencing from the initial attack movement at level 1 performed by fencer A, which generates a range of possible reactions from fencer B in level 2. This graph displays the fencing phrases whose frequency is greater than or equal to 2

Figure 2: The tree tactics in fencing with pressure and preparations. We considered the actions that prepare the beginning of the attack with pressure and preparation. This graph displays the fencing phrases whose frequency is greater than or equal to 5.

Discussion & Conclusions

Decision-making processes determine the interaction between opponents. These processes are conditioned by the coach's fencing lessons. This tree allows the identification of the most favorable situations for the fencer who initiates the offense ("A") or his opponent's ("B") at various levels of tactical thinking (I to VI). Tree analysis of tactics presented in this study can boost the optimization of training decisional factors in fencing. As the main contribution of this study (Tarragó, 2017), we present an original structure for the distribution and effectiveness of assessment of tactical actions in fencing.

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