

The WAGER, Vol. 19(11) - Pa-pa-pa-poker face: Looking for tells in all the wrong places

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For all but nine participants, the 2014 World Series of Poker (WSOP) has been over for three months. As they have done during the past few fall seasons, ESPN has been airing its highlight reel episodes showing action from the \$10,000 Main Event. Even though ESPN has inserted the [hole cards](#) into the footage, viewers at home still can watch the players' [facial expressions and betting motions](#), and think about what kinds of reads they would make if they were at the table. "Would I have thought that he had a strong hand or a weak one?" "Would I have been fooled into making the wrong decision?" In particular, viewers can track the accuracy of their initial reads - or "thin slice " judgments. This week, the WAGER reviews a study in which college students try to guess the strength of hands from the 2009 World Series, using only [thin slice](#) (Ambady, 2010) footage of players as they bet (Slepian et al., 2014).

Methods

- The researchers extracted twenty extremely brief (mean=1.6 seconds) silent video clips of a player making a bet from the ESPN coverage of the 2009 World Series of Poker.
 - The ESPN footage showed the "hot/cold probability"[\[1\]](#) of winning for the bettor's hand.
 - During the editing process, the researchers obscured actual hands, the bet sizes, and the bettor's probability of winning from view.
- Three groups of 26 undergraduates each were shown different versions of the 20 1-2 second clips to rate the quality of the bettor's [unknown] hand based on the clip, using a Likert scale from 1 ("very bad") to 7 ("very good").
 - One group viewed cropped versions showing the bettor from the chest up ("face-only").
 - Another group viewed cropped versions with only the arms

moving the chips forward (“arms-only”).

- The last group viewed clips showing the bettor from the table up (“upper-body”).
- The undergraduates also used 7-point Likert scales to rate their level of poker experience (where, 1 = “none” and 7 = “a lot”).
- The researchers also measured the undergraduates’ sensitivity to nonverbal cues.
- The researchers measured the concordance between the three groups’ participants’ Likert scale ratings based on the video clips and thebettors’ hot/cold probabilities.

Results

- The arms-only group’s ratings significantly predicted the bettor’s likelihood of winning ($b = 0.94$).
- The face-only group’s ratings inversely predicted the bettor’s likelihood of winning ($b = -0.74$), meaning that ratings of “very good” were more likely to correspond to lower hot/cold probabilities.
- The sets of 20 ratings from the participants in the arms-only group were on average stronger predictors of the bettor’s likelihood of winning than the sets of ratings given by participants in the face-only group ($b = 1.68$).
- The sets of 20 ratings from participants in the upper-body group were not significantly different from participants in the face-only group ($b = 0.95$).
- For the arms-only group, better nonverbal sensitivity and more experience with poker were both associated with more accurate predictions of hand quality.
- For the face-only and upper-body groups, the accuracy of the hand quality ratings were not significantly associated with either nonverbal sensitivity or poker experience.

Participant group	Correlation with nonverbal sensitivity	Correlation with poker experience level
Arms-only	0.40*	0.39*
Face-only	0.17	-0.32
Upper-body	0.14	0.14

Figure. Correlations between accuracy of hand ratings to participants’ nonverbal sensitivities and poker experience levels. Excerpt from Slepian et al. (2014). * $p <$

0.05.

Limitations

- The participants were all undergraduates. They might not be representative of college students, adults, or the general population. For example, it is possible that older people, because they have more life experience, might be able to glean more information from the thin slice clips.
- The footage came from hands and tables chosen and aired by ESPN. They could have been tables and hands that featured famous poker players and celebrities. They could have been hands from towards the ends of tournaments (including final tables). The footage sampled might not be representative of the professional poker community.
- To measure the quality of hands, the researchers used hot/cold probabilities. Since bettors cannot see their opponents' cards, they are almost never 100% sure what this probability is. Instead, most strong poker players make educated guesses about the range of hands their opponents might be holding and work from there. They might estimate the hot/cold probability against each of the hands in the range and then average them, or they might estimate the percentage of the range that the opponent will fold. As such, the visual cues the bettors show might be based on these calculations rather than the actual hot/cold probabilities.
- The effect sizes for sensitivity to nonverbal cues and level of poker experience are relatively small; consequently, other influences account for the majority of variance associated with the differences in the participants' accuracies.

Conclusion

"Knowing what the cards were by the way they held their eyes" is a line from Kenny Rogers' classic song "The Gambler." However, based on this study, using facial cues to determine the strength of an opponent's hand might be overrated. It is interesting that the arms-only group were able to make more accurate judgments based on thin slices of footage, without the contexts of either the previous actions in the specific hand or the flow of play through the whole playing session. Perhaps there is something to be said for trusting snap decisions and first instincts.

It should be noted that the footage used featured mostly professional poker players, most of who think consciously about not exhibiting tells. Weaker players and disordered poker players, on the other hand, might not give as much attention to these details. Looking for tells in their eyes and mouths might be more useful. During 2012, Linnet et al. reported that, in a small poker-related task, experienced players were better at estimating probabilities of winning than inexperienced players and players with pathological gambling. Perhaps future studies will show that the key tells to look for from professional players and from problem players are different from the key tells to look for from everyone else.

- Matthew Tom

What do you think? Please use the comment link below to provide feedback on this article.

References

Ambady, N. (2010). The Perils of Pondering: Intuition and Thin Slice Judgments. *Psychological Inquiry*, 21(4), 271-278. doi:10.1080/1047840X.2010.524882

Linnet, J., Frøslev, M., Ramsgaard, S., Gebauer, L., Mouridsen, K., & Wohlert, V. (2011). Impaired Probability Estimation and Decision-Making in Pathological Gambling Poker Players. *Journal of Gambling Studies*, 28(1), 113-122. doi:10.1007/s10899-011-9244-2

Slepian, M. L., Young, S. G., Rutchick, A. M., & Ambady, N. (2013). Quality of Professional Players' Poker Hands is Perceived Accurately from Arm Motions. *Psychological Science*, 24(11), 2335-2338. doi:10.1177/0956797613487384

[\[1\]](#) This is the probability that the bettor would have the best hand if all the players revealed their hole cards and the remaining community cards were dealt out.