

# Style Consensus: Style of Professional Players Judged by Strong Players

Josef Moudřík, Petr Baudiš

Faculty of Math and Physics, Charles University, Prague, CZ

May 30, 2013

## Abstract

GoStyle (Moudřík and Baudiš, 2013) is a project we founded to study possibilities of computer analysis of databases of Go games. As a part of this project, we conducted (partly manual and partly online) a questionnaire, where we ask experts (strong amateur or professional players) to judge styles of several professional Go players. The experts were asked to judge each professional on four scales reflecting the traditional Go knowledge. In this report, we publish these results, along with definitions of styles and acknowledgement of the interviewees. The purpose is to make the data available to the general public.

## 1 Questionnaire Setup

We chose a small subset of well known players (mainly from the 20th century) and asked some experts (professional and strong amateur players; see acknowledgement) to evaluate these players using a questionnaire. Initially (first three experts from the acknowledgement) this was done by hand using an e-mail based questionnaire, the rest of the experts were asked using our online questionnaire<sup>1</sup>.

The experts were asked to value the players on four scales, each ranging from 1 to 10.

Style	1	10
Territoriality	Moyo	Territory
Orthodoxy	Classic	Novel
Aggressivity	Calm	Fighting
Thickness	Safe	Shinogi

---

<sup>1</sup><http://gostyle.j2m.cz/questionare.html>

The scales try to reflect some of the traditionally perceived playing styles.<sup>2</sup> For example, the first scale (*territoriality*) stresses whether a player prefers safe, yet inherently smaller territory (number 10 on the scale), or roughly sketched large territory (*moyo*, 1 on the scale), which is however insecure. The meaning of boundary terms in all four scales (maybe except the last one) should be clear to any fairly experienced player. Apart from the table above, the experts had not thus been given any more information regarding the styles.

There has been some discussion (Moudřík, 2013, Discussion) about proper meaning of the last scale and we might want to redefine it in the future. Apart from this, we also plan to rename the Scale of Orthodoxy to Novelty in the further data collection, so that the name of the scale reflects the “trend” given by names of the boundaries — in the questionnaire presented so far, the number 1 was unfortunately assigned to Classic style of game and 10 to Novel style of game.

The experts’ answers were collected 2010 to 2013.

## 2 Results

Are given in the Table 2 along with standard deviation of individual answers. Mean standard deviation of the answers is 1.302, so we consider the results reasonably precise.

The following table lists mean value of answers within each scale (to show how are the 1 to 10 scales “populated”) and pairwise correlations between different styles, using the Pearson’s correlation coefficient (Rodgers and Nicewander, 1988).

—		Pearson’s $r$			
Style	Mean value	Ter.	Orth.	Aggr.	Thick.
Territoriality	$5.762 \pm 2.418$	1.000	-0.574	-0.638	0.339
Orthodoxy	$5.494 \pm 2.209$		1.000	0.730	0.105
Aggressivity	$6.679 \pm 2.135$			1.000	0.324
Thickness	$4.954 \pm 1.645$				1.000

Table 1: The mean values of styles (across all the answers) and the pairwise correlation between them.

## 3 Acknowledgement

We would like to thank the following people for filling the questionnaire (in the order of submitted answers):

Motoki Noguchi 7-dan, Alexander Dinerchtein 3-pro, Vít Brunner 4-dan, Vladimír Daněk 5-dan and Lukáš Podpěra 5-dan.

---

<sup>2</sup>Refer to Fairbairn (winter 2011), or Sensei’s Library (2013).

## References

- J. Fairbairn. Games of Go on Disk — GoGoD Encyclopaedia and Database, Go players' styles, winter 2011. URL <http://www.gogod.co.uk/>.
- J. Moudřík. Meta-learning methods for analyzing go playing trends. Master's thesis, Charles University, Faculty of Mathematics and Physics, Prague, Czech Republic, 2013. Currently in preparation.
- J. Moudřík and P. Baudiš. GoStyle — Determine playing style in the game of Go, 2013. URL <http://gostyle.j2m.cz/>.
- J. L. Rodgers and W. A. Nicewander. Thirteen ways to look at the correlation coefficient. *The American Statistician*, 42(1):59–66, Feb 1988.
- Sensei's Library. Professional players' go styles, 2013. URL <http://senseis.xmp.net/?ProfessionalPlayersGoStyles>.

#	Player	Territoriality	Orthodoxy	Aggressivity	Thickness
5	Cho Chikun	$8.4 \pm 1.4$	$5.8 \pm 2.5$	$7.2 \pm 1.3$	$9.2 \pm 0.7$
5	Cho U	$7.2 \pm 1.8$	$6.0 \pm 2.0$	$6.6 \pm 2.1$	$6.4 \pm 1.4$
5	Gu Li	$6.4 \pm 1.2$	$7.4 \pm 1.5$	$9.0 \pm 0.9$	$5.4 \pm 1.9$
5	Ishida Yoshio	$8.6 \pm 1.4$	$3.4 \pm 2.2$	$3.0 \pm 1.1$	$4.2 \pm 1.5$
5	Otake Hideo	$5.4 \pm 1.9$	$3.2 \pm 1.6$	$3.8 \pm 1.5$	$3.4 \pm 1.0$
5	Sakata Eio	$7.6 \pm 1.6$	$3.4 \pm 1.6$	$8.0 \pm 1.1$	$8.2 \pm 1.3$
5	Takemiya Masaki	$1.4 \pm 0.5$	$5.0 \pm 2.4$	$7.2 \pm 0.7$	$2.0 \pm 0.9$
5	Yi Ch'ang-ho	$7.8 \pm 1.7$	$5.6 \pm 1.9$	$4.6 \pm 2.3$	$3.2 \pm 0.7$
5	Yi Se-tol	$6.0 \pm 1.1$	$7.8 \pm 2.3$	$9.4 \pm 0.5$	$7.6 \pm 1.5$
4	Kobayashi Koichi	$9.5 \pm 0.9$	$2.0 \pm 0.7$	$2.8 \pm 0.4$	$4.0 \pm 1.6$
4	Ma Xiaochun	$8.2 \pm 1.9$	$5.2 \pm 1.9$	$5.2 \pm 1.8$	$6.8 \pm 2.3$
4	O Meien	$2.5 \pm 1.1$	$8.2 \pm 2.5$	$8.0 \pm 1.6$	$4.8 \pm 2.2$
4	Rui Naiwei	$5.5 \pm 1.8$	$5.5 \pm 0.5$	$9.0 \pm 0.7$	$4.0 \pm 1.6$
4	Yoda Norimoto	$7.0 \pm 1.9$	$3.8 \pm 2.0$	$4.0 \pm 1.9$	$3.2 \pm 1.1$
3	Go Seigen	$4.7 \pm 2.5$	$6.3 \pm 3.9$	$8.0 \pm 0.8$	$5.3 \pm 0.9$
3	Hane Naoki	$8.0 \pm 0.8$	$3.3 \pm 1.2$	$4.0 \pm 0.0$	$4.0 \pm 1.4$
3	Kato Masao	$3.0 \pm 0.8$	$3.7 \pm 1.7$	$8.7 \pm 1.2$	$5.7 \pm 2.4$
3	Luo Xihe	$7.3 \pm 0.9$	$7.3 \pm 2.5$	$7.7 \pm 0.9$	$6.0 \pm 1.4$
3	Yamashita Keigo	$2.0 \pm 0.0$	$7.3 \pm 2.5$	$9.3 \pm 0.5$	$4.0 \pm 1.6$
2	Chen Yaoye	$6.0 \pm 1.0$	$4.0 \pm 1.0$	$6.0 \pm 1.0$	$5.5 \pm 0.5$
2	Fujisawa Hideyuki	$3.5 \pm 0.5$	$9.0 \pm 1.0$	$7.0 \pm 0.0$	$4.0 \pm 0.0$
2	Honinbo Shusaku	$8.5 \pm 0.5$	$2.0 \pm 1.0$	$4.5 \pm 2.5$	$4.0 \pm 2.0$
2	Miyazawa Goro	$1.5 \pm 0.5$	$10.0 \pm 0.0$	$9.5 \pm 0.5$	$4.0 \pm 1.0$
2	Takao Shinji	$5.0 \pm 1.0$	$3.5 \pm 0.5$	$5.5 \pm 1.5$	$4.5 \pm 0.5$
2	Yuki Satoshi	$3.0 \pm 1.0$	$8.5 \pm 0.5$	$9.0 \pm 1.0$	$4.5 \pm 0.5$

Table 2: Expert-based evaluation of styles of selected Professionals, including standard deviation of their answers. Only the players that were evaluated by two or more experts are included. Number of experts who evaluated the particular player is given in first column.