

THE OFFICIAL TECHNICAL PUBLICATION OF THE UNITED STATES GYMNASTICS FEDERATION

Vol. 6, No. 1

### FIG Code Of Points 1985-88 Optional Exercise Breakdown Requirements Of The Exercise





Bias Correction Factors: A Proposal To Minimize Unwanted Pattern Bias In International Competitions

NON PROFIT ORGANIZATION U.S. POSTAGE PAID Indianapolis, IN PERMIT NO. 123

### **New From the USGF Bookstore**



#### Coaching Young Athletes

#### Rainer Martens, Robert W. Christina, John S. Harvey, Jr., & Brian J. Sharkey

Becoming a successful coach is what Coaching Young Athletes is all about! And being successful doesn't just mean winning meets; it means helping young athletes to enjoy mastering new skills, to enjoy competing with others, and to feel good about themselves. You'll be challenged to develop a coaching philosophy and to learn the essentials of sport psychology, sport pedagogy, sport physiology, and sports medicine—all in a fun and interesting way!

1981 • Paper • 200 pp • \$12.00 - US & Canada



## Physiology of Fitness (2nd Edition)

#### Brian J. Sharkey

Here's a fitness book that's different. One that's comprehensive, well-written, and easy to use. And, it's written by one of the foremost authorities on fitness. In addition to covering the basics of aerobic fitness, fitness and weight control, and fitness and lifestyle, this second edition includes new views on the causes of overweight and obesity, and a revised section on muscular fitness training. Sharkey also provides 100 pages of helpful appendices with tests, programs, and information on caloric intake and expenditure.

1984 • Paper • 384 pp • \$12.95 - US & Canada

#### Coaching Women's Gymnastics

#### **Bill Sands**

Finally! A common-sense approach to coaching women's gymnastics. The four-part book is directed at both novice and experienced coaches and includes the following chapters:

#### I. Philosophy

- 1. Why Coaching?
- 2. The Role of the Coach
- 3. Commitment
- 4. Setting Reasonable Goals

#### II. Program

- 5. Schedule and Training Load
- 6. Facility and Equipment
- 7. The Support Staff
- 8. The Selection Process
- 9. Talented and Enthusiastic Coaches
- 10. Research

#### III. Preparation

- 11. Physical Preparation
- 12. Psychological Preparation
- 13. Technical Preparation
- 14. Tactical Preparation
- 15. Theoretical Preparation

#### IV. Applications

- 16. Looking at Two Skills
- 17. The Full-In: A Methodology
- 18. The Gymnast and the Warm-up
- 19. Overtraining
- 20. Compositional Analysis: Uneven Bars
- 21. Observations of Training: Female Foreign Gymnasts at the 1981 American Cup

#### **Additional Information**

Epilogue • Daily Training Diary • Computer Programs • Associations • Magazines and Journals • Recommended Books • Bibliography

1984 • Hard • 288 pp • \$17.95 - US & Canada

Price

Total

#### ADDITIONAL BOOKS OF INTEREST . . .

#### In Pursuit of Excellence Terry Orlick

Find out how psychological tools such as relaxation, mental imagery, and concentration can help both athletes and coaches in their pursuit of excellence.

1980 • Paper • 326 pp • \$10.95 - US & Canada

#### Joy and Sadness in Children's Sports Edited by Rainer Martens

A unique blend of informative and entertaining articles by well-known writers and athletes concerning major issues in children's sports.

1978 • Paper • 375 pp • \$11.95 - US & Canada

#### Living Anatomy Joseph E. Donnelly

This "nontraditional" approach to learning anatomy uses a "hands on" approach instead of relying on rote memorization. The *living anatomy* technique is fun—and it really works!

1982 • Spiral • 207 pp • \$13.95 - US & Canada

#### Coaches' Guide to Nutrition and Weight Control Patricia Eisenman & Dennis A. Johnson

Contains the most up-to-date information on the "whys" and "hows" of high octane diets, food fads and myths, achieving ideal weight, and more!

1982 • Paper • 255 pp • \$9.95 - US & Canada

#### Children in Sport (2nd Edition) Edited by Richard A. Magill, Michael J. Ash, & Frank L. Smoll

Twenty articles examine the current state of youth sports research and offer guidelines to be applied in sport settings.

1982 • Paper • 327 pp • \$10.95 - US & Canada

#### Ergogenic Aids in Sport Edited by Melvin H. Williams

Learn about the latest research on 13 common substances or treatments used by athletes today in an effort to gain the "winning edge."

1983 • Hard • 395 pp • \$23.95 - US & Canada

ORDER FORM	
Enclose check or money order payable to USGF Bookstore. Payment must accompany order. Return order to USGF Bookstore, 1099 N. Meridian St., Suite 380, Indianapolis, IN 46204. Amount enclosed	
SEND TO:	
Name	_
Address	
City State	

Phone \_\_\_

	Total	
Ergogenic Aids in Sport	\$23.95	
Children in Sport	\$10.95	
Coaches' Guide to Nutrition and Weight Control	\$ 9.95	
 Living Anatomy	\$13.95	
Joy and Sadness in Children's Sports	\$11.95	
In Pursuit of Excellence	\$10.95	
Coaching Young Athletes	\$12.00	
Physiology of Fitness	\$12.95	
Coaching Women's Gymnastics	\$17.95	

Title



Vol. 6, No. 1

### Inside This Issue

**Cover Story** 

4-11 FIG Code Of Points 1985-88 Optional Exercise Break- Review Board down Requirements Of The Exercise

Compiled by: Chervl Grace Chairman

14 **Bias Correction Factors:** By Bill A Proposal to Minimize Roetzheim and Unwanted Pattern Bias In Ted Muzyczko **International Competi**tions

#### Selection Procedures 18

Cover photos © 1985 USGF by Dave Black All inside photos @ 1985 USGF by Dave Black

CHANGE OF ADDRESS AND SUBSCRIPTION INQUIRIES. In order to ensure uninterrupted delivery of TECHNIQUE magazine, notice of change of address should be made six to eight weeks in advance. For fastest service, please enclose your present mailing label. Direct all subscription mail to TECHNIQUE SUBSCRIPTIONS. 1099 N. Meridian St., Suite 380, Indianapolis, IN, 46204. POSTMASTER. Send address change to TECHNIQUE, 1099 N. Meridian St., Indianapolis, IN 46204.

TECHNIQUE is published quarterly for \$12.00 by the United States Gymnastics Federation, 1099 N. Meridian St. Suite 380, Indianapolis, IN, 46204 (Phone 317-638-8743). Third class postage paid at Indianapolis, IN Subscription price \$12 00 per year in United States, all other countries \$24 00 per year. All reasonable care be taken, but no responsibility can be assumed for unsolicited material, enclose return postage USGF and Technique. All rights reserved. Printed in USA

#### Preparation of Articles for Submission:

Please follow a uniform format of preparing articles for submission in order to provide the most efficient channel through the evaluation and review process. The following should be included in submissions

- An original type copy, doubled spaced on 81/2 x 11 inch paper
- An abstract, on a separate page, a short summary of procedure and explanation of study or article content (not more than 150 words)
- A short biographical paragraph on a separate page of the author or authors accompanied by a small photo ( $2\% \times 3\%$ ") of the author
- References on a separate sheet double spaced in consecutive order, using Index Medicine style (author's name—last name first, name of book, city. publisher, year, page numbers) journal references, should follow same format (author, name of article, Journal name, volume, pages, year)
- Duplicates of pictures and diagrams or figures (black and white preferred) with sharp detail Also include explanations (captions) of pictures and diagrams on a separate sheet Photograph release—a letter of release from any

identifiable subject in photos that are included in the article unless the face or eyes are obscurred Letter should be signed by subject, parent or guardian

Title page consisting of an informative title author's name and complete institutional or professional address

#### Submission of Articles for Publication:

Written articles will be accepted for review and possible publication in the following procedure. First the articles are sent to

> USGF Department of Publications 1099 N Meridian St. Suite 380 Indianapolis, IN 46204

Upon receipt of the article, to the USGF office, the research coordinator will review and forward copies to the appropriate USGF Sports Advisory Committee members for review. On receiving their review, copies of the article will go to the Managing Editor and Executive Director for final approval for publication

If it is necessary for the article to be edited or revised in order to improve the effectiveness of communication to a wide variety-level of readers, the author will receive the

edited article prior to publishing for their approval.

If the article or parts of have been submitted and/or published by another publication, a complete name and address of the Editor and Publication should accompany the article upon submission to the USGF in order to follow proper procedures of publishing and to receive approval to reproduce the article in the USGF publicaPublisher ..... Mike Jacki Associate Editor .. Gerald S. George, Ph.D. Consulting Editor ...... Robert Cowan Production ..... Michael G. Botkin

#### **USGF Member Organizations**

Amateur Athletic Union; American Sokol Organization; American Turners; Association for Intercollegiate Athletics for Women: National Association for Girls and Women's Sports; National Assoc. of College Gymnastics Coaches; NACGC-Women; National Assoc. of Women Gymnastics Judges; NCAA; National Federation of State High School Assoc.; National Gymnastics Judges Assoc.; National High School Gymnastics Coaches National Jewish Wel-fare Board; National Junior College Athletic Assoc.; United States Assoc. of Independent Gymnastics Clubs; United States Gymnastics Safety Assoc.; Young Men's Christian Assoc.; Men's Elite Coaches Assoc.; Women's Elite Coaches Assoc.; Special Olympics, Inc.

United States Gymnastics Federation Board of Directors: Executive Director, Mike Jacki, Athlete Representatives: Nancy Marshall; Brent Simmons; Larry Gerard, Tom Beach; Lydia Bree; Kathy Johnson; Diane Bijesse; Tim LaFleur. Amateur Athletic Union: Jerry Hardy. American Sokol Organization: Norma Zabka. American Turners: Harry Warnken. Members at Large: Sue Ammerman and Linda Chencinski. NCAA Gymnastics Coaches — Men: Rusty Mitchell, University of New Mexico. NCAA Gymnastics Coaches — Women: Judy Avener, Penn State University. National Association for Girls and Women in Sports: Dr. Mimi Murray, Springfield College. National Association of Women's Gymnastics Judges: Dale Brown. NCAA: Sylvia Moore, Oregon State University; Greg Marsden, University of Utah; Jerry Miles, % NCAA; Wayne Young, Brigham Young University. NAIA: Bonnie Morrow. NHSGCA: John Brinkworth. National Federation of State High School Athletic: Sharon Wilch; Susan True. National Jewish Welfare Board: Courtney Shanken. NJCAA: Dave Rowlands, Truman College; Arlene Crossman, Linn Benton College. NGJA: Mike Millidonis. USAIGC: Ed Knepper. Men's Elite Coaches Assoc.: Jim Howard, University of Nebraska. USECA for Women: Roe Kreutzer; Steve Whitlock. Young Men's Christian Assoc.: Bud Wilkinson. Jr. Boy's Gym. Coaches Assoc.: Rich Boccia. President: Mike Donahue

#### **Associate Content Editors**

Sports Medicine

Committee Safety Committee **Education Committee Biomechanics** 

Merrill A. Ritter, M.D. Dr Marc Rabinoff Dr. Garland O'Quinn

Committee Dr. Marlene Adrian, Director

Sports Psychology Dr. Keith Henschen, Ph.D. Committee **Exercise Physiology** 

Dr. Pat Eisenman, Ph.D. Committee

Unless expressly identified to the contrary, all articles, statements and views printed herein are attributed soley to the author and the United States Gymnastics Federation expresses no opinion thereon and assumes no responsibility thereof

## FIG Code Of Points 1985-88 Optional Exercise Breakdown Requirements Of The Exercise

ince the Women's 1985-88 FIG Code of Points was distributed last year, there have been several clarifications and additions in rules that govern judging women's gymnastics. The following Judging Outlines clearly define the judging rules and interpretations for each event that will aid judges in the consistent and accurate evaluation of the exercises.

-Cheryl Grace

#### February 20, 1986

- \* Original Lecture Material & Transparencies Jackie K. Fie, FIG WTC Vice President
- \* Complied by: Cheryl Grace Review Board Chairman
- \*FIG CODE OF POINTS, 1985 Edition
- \* USGF WTC Decisions & Interpretations for Elite and Junior Olympic Program

#### **Review Board:**

Joan Aschenbrenner
Dale Brown
Delene Darst
Jackie Fie
Joanne Pasquale
Audrey Schweyer
Sharon Valley

## GENERAL LECTURE FIG CODE OF POINTS 1985-88 OPTIONAL EXERCISE BREAKDOWN REQUIREMENTS OF THE EXERCISE

#### VALUE PARTS (Difficulty) — 3.0

Competition IB	Competition II	Competition III
3 A @ .2 = 0.6	2 A @ .2 = 0.4	1 A @ .2 = 0.2
3 B @ .4 = 1.2	2 B @ .4 = 0.8	2 B @ .4 = 0.8
2 C @ .6 = 1.2	3 C @ .6 = 1.8	2 C @ .6 = 1.2
	(1 Natural C)	1 D @ .8 = 0.8
		(2 Natural C)

Value Parts 3.0(8) Value Parts 3.0(7) Value Parts 3.0(6)

The B, C and D elements require a definite technical execution. If such an element is not executed according to the required technique, then it looses its value as B, C or D respectively and is lowered one value step.

\*If a C or D element performed at a level where it is not allowed, regardless of how it is executed, it cannot be devalued and it will be recognized as the listed value in the Code or Supplement.

#### **BONUS POINTS - 0.5**

Originality maximum 0.2 (NV/RV)
Additional D maximum 0.1
Virtuosity maximum 0.2

#### Originality: 0.2

- A. There are specific elements listed by the FIG and USGF Supplement to the Code for NV and RV credit. Total amount of originality category = 0.2 (NV elements are worth 0.2 and RV elements are worth 0.1)
- B. The USGF Junior Olympic and Elite Program. In addition to the current possibilities for earning 0.2 bonus points for originality (0.1 RV and 0.2 NV) via performance of a specific list of skills, the USGF will expand the NV-RV category to reward the performance of creative, unique, high-level skills and combinations that are similar to elements already listed as having NV-RV value (not FIG).
- C. Guidelines for awarding NV and RV based on this concept (not FIG).
  - Single elements of C or D value will be considered for RV (0.1) or NV (0.2)
  - 2. Combinations of elements, with a minimum of A+B or B+B will be considered for RV (0.1).
  - 3. Combination of elements, with a minimum of B+C or C+C will be considered for RV (0.1) or NV (0.2).

#### Additional D: 0.1

- A. D elements used to replace a C or B element will not count for Bonus.
- B. If a fall occurs while performing a D element, bonus will not be awarded.
- C. In principle, bonus points will be given only for successfully completed - well done C and D elements. If the element is devalued because of improper technique, bonus points will not be given. The gymnast

<sup>\*</sup>Deduction for using a value raised C where a natural C is required: 0.2

will receive no bonus points for an element immediately followed by a fall or an extra swing.

#### Virtuosity: 0.2

- A. Must fulfill value parts and special requirements of exercise (awarded only when the deductions for execution and composition do not exceed 0.3 in total - Maximum 3  $\times$  0.1).
- B. 0.2 Virtuosity may be given if deductions for execution and/or composition errors do not exceed 0.1 each (i.e.,  $3 \times 0.1$ ).
- C. 0.1 Virtuosity may be given if deductions for execution and/or composition errors do not exceed 0.2 + 0.1 (i.e.,  $1 \times 0.2 + 1 \times 0.1 = 0.3$  total).

#### FOR USGF JUNIOR OLYMPIC AGE GROUP PRO-GRAM ONLY:

In addition to the regulations governing virtuosity in the Code of Points, if a gymnast has up to a maximum of 0.4 deductions for an exercise she may be awarded 0.1 or 0.2 bonus points for virtuosity. No virtuosity can be given for a routine containing a 0.3 execution error. (This is effective for the JO Program and is a recommendation for the WIPC for Elite).

Examples: FIG Regulations - Total Deductions

Three (3)  $\times$  0.1 = 0.3 - Must give 0.2 virtuosity

One (1)  $\times$  0.2 plus One (1)  $\times$  0.1 = 0.3 -Must give 0.1 virtuosity

In addition for USGF competition in Junior Olympic Program Total Deductions

Four (4)  $\times$  0.1 = 0.4 - MAY give 0.1 or 0.2 virtuosity

One (1)  $\times$  0.2 + Two (2)  $\times$  0.1 = 0.4 - MAY give 0.1 or 0.2 virtuosity

Two (2)  $\times$  0.2 = 0.4 - MAY give only 0.1 virtuosity

One (1)  $\times$  0.2 = 0.2 - MUST give 0.2 virtuosity

#### COMBINATIONS (Composition) - 2.5

Progressive distribution of elements, mount/dismount corresponding to the value of the exercise

Diversified, original composition of the exercise 1.0 through the various value parts and connections

Space and Direction 0.5

Tempo and Rhythm 0.5

#### **EXECUTION - 4.0**

- A. Faults in technique corresponding execution deductions
  - 1. Insufficient amplitude:

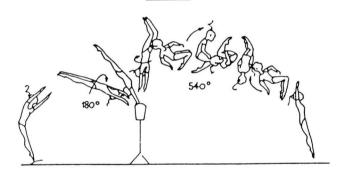
Performance of elements from an insufficient high starting and ending position and with insufficient flight during bar change and hopgrip change elements.

-Slight 0.1 -Medium 0.2

2. Too many segmented body parts (body lines) according to the character of the element:

-Slight opening of the legs, bending of the arms, leas, or hips 0.1 -Medium posture failures such as bent knees, arms, hips, or open legs \*Normally 0.2 \*Maximum 0.3 3. Incomplete or slow changes in body position according to the character of the element: —Tuck, pike or stretch position/shape 0.1 4. Incorrect timing - performance too early or too late: -Salto 0.1 —Twist or Pirouette (free) 0.1 -Turn in handstand 0.1 -Release - hop grip change in handstand 0.1 —Stop (more than 2 seconds) 0.1 5. Larger execution errors resulting from incorrect technique: 0.3 -Extra swing

#### FIG CODE OF POINTS **VAULT**



Competition IA

\*1 Vault Only (Elite) 1 Balk Permitted

-Fall

Competition IB & II

2 Vaults/same or different Betters vault counts (IB Rules used for JO Program)

0.5

Competition III

2 Vaults/different vault numbers Average score of both vaults the Final Average Score is formulated as follows:

la + lb = Average + Competition III

Average of Both Vaults

\*Groups I - Handsprings, Cartwheels with and without Longitudinal Axis Turn

> II - Salto Forward with and without Longitudinal Axis Turn

> III - Salto Backward with and without Longitudinal Axis Turn

IV - Vaults from a Round-Off

A Vaults To 9.00 pts.

9.10 pts to 9.5 pts. B Vaults C Vaults 9.60 pts. to 9.90 pts.

D Vaults 10.00 pts.

\*Changes or Additions from the 1980-84 Code of Points.

All judges evaluate the vaults from the starting (maximum) value (SV) of the <u>performed</u> vault, according to the Vault Table.

#### SPECIFIC APPARATUS DEDUCTIONS

#### First Flight

1. Body position fault (trunk, legs) up to 0.2

2. Strong tuck of legs (not corresponding to vault called) up to 0.3

3. Prescribed LA turn not completed up to 0.3

#### Support Phase

1. Body position fault (trunk, legs) up to 0.2

2. Too long in support

up to 0.3

3. Arms remain bent in the support phase up to 0.5

#### Second Flight Phase

1. Body position fault (trunk, legs) up to 0.2

2. Prescribed turn begun too early or not completed up to 0.3 each

3. Insufficient height/length \*4. No stretch/open of the body

up to 0.5 each

before landing up to 0.3

5. Insufficient tuck, pike or stretch up to 0.2

#### Landing

1. Deviation from straight direction up to 0.3
2. Aid during landing 0.5 (HJ)

3. Landing fault

-small -medium 0.1 up to 0.3

#### OTHER DEDUCTIONS

Compulsory vault does not correspond to required execution Invalid

2. More than one preparatory element before arrival on board Invalid

3. Aid during vault Invalid

4. Approach touching springboard Invalid

5. Insufficient dynamics up to 0.2

\*6. Incorrect or no vault number 0.3 (HJ)

7. Competition III

-One vault only - Average score of the perfored vault divided by two (HJ)

-Two identical vaults - Deduction from the final average score (average of both vaults).

\*1.0 (HJ)

\*Changes or Additions from 1980-1984 FIG Code of Points

#### FIG Groups of Vaults

Group	A - Up to 9.0	B - 9.10 to 9.50	C - 9.60 to 9.90	D - 10.00
#1 - Handsprings with and without turns in the LA axis	1.01 Front Hspg. 8.80 1.02 ¼ On ¼ Off 8.80 1.03 ½ On ½ Off 9.00	1.21 1/4 On 11/4 Off 9.4	0 1.41 ½ On - 1½ Off 9.60 0 0	1.60 Hspg. 2/1 Twist 1.61 1/1 - 1/1 Off 1.62 1½ On - ½ Off 1.63 1½ On - 1/1 Off
#2 - Saltos forward with and without turns in the LA axis			2.40 HS 1½ Fwd. Tuck 9.80 2.41 HS 1½ Fwd. Pike 9.90 2.42 HS 1½ Fwd. Tuck with ½ Turn 9.90	2.60 HS 1½ Fwd. Pike with ½ Turn 2.61 HS 1½ Fwd. Tuck with 1/1 Turn 2.62 ½ Ond HS - ½ Off Salto Fwd. Tuck 2.63 Salto Fwd. On - Optional Second Flight 2.64 Salto Fwd. On - Salto Fwd. Off 2.65 HS 1/1 On and Salto Fwd. Off 2.66 HS On - Double Salto Fwd. Off 2.67 Salto Fwd. On and HS 1/1 Off
#3 - Saltos backward with and without turns in LA axis		3.20 Tsuk Tuck 9.4 3.21 Tsuk Pike 9.5	a landa manana and a landa	3.60 Tsuk Tucked with 1/1 3.61 Tsuk Pike or Stretch with 1.1 3.62 Tsuk Tuck with 1½ 3.63 Tsuk Pike with 1½ 3.64 HS on - ½ Tn Salto Backward Off Tuck 3.65 HS On - ½ Tn Salto Backward Off Pike 3.66 HS On - ½ Tn Salto Backward Off Tuck or Pike with add Tn. 3.67 HS 1½ Tn On - Salto Backward Off 3.68 Tsuk with Double Salto Tuck 3.69 Tsuk with Double Salto Pike
#4 - Round off vaults (only allowed at Elite Level competition)		4.20 Round off Backward Tuck 9.4 4.21 Round off Backward Pike 9.5	Stretched 9.90	4.60 Round off flic-flac Salto with 1/1 Turn 4.61 Round off flic-flac Salto pike or stretch with 1/1 Turn 4.62 Round off flic-flac with 1/1 Turn On - Off 4.63 Round off flic-flac with 1/1 Turn on - 1/1 Turn off Tuck Pike or Stretch

#### USGF VAULT VALUES

#### **ELITE ONLY**

- 9.5 Round-off ½ turn on 1/1 turn off
- 9.6 Round-off ½ turn on 1½ turn off
- 10.0 Round-off ½ turn on 2/1 turn off
- 9.9 Round-off ½ turn on salto frwd tuck
- 10.0 Round-off ½ turn on salto frwd pike
- 10.0 Round-off ½ turn on salto frwd tuck with ½ turn
- 9.1 Round-off flic flac ½ turn off
- 9.4 Round-off flic flac 1/1 turn off
- 9.5 Round-off flic flac 1½ turn off
- 9.7 Round-off 1/1 turn on  $\frac{1}{2}$  turn off
- 9.8 Round-off 1/1 turn on 1/1 turn off
- 9.9 Round-off 1/1 turn on 1½ turn off
- 9.7 Round-off 1½ turn on H.S. off

#### **USGF VAULT**

#### **VAULES:**

- 8.8 Yamashita
- 8.8 Yamashita 1/2
- 9.4 Yamashita Full
- 10.0 ½ on 2/1 twist off 10.0 1/1 on 1½ twist off
- 10.0 H.S. on 2½ twist or more off

#### **USGF VAULT VALUES**

#### \*Class IIIO ONLY:

- 8.4 ½ on repulsion off 8.8 H.S. on - ½ turn off
- 7.0 Squat
- 7.5 Straddle
- 7.5 Stoop
- \* VOID IF PERFORMED AT ANY OTHER LEVEL.

before B elements for value raising. Only B and above acrobatic flight elements value raise. Non-flight B's do not raise, but can be used to value raise elements.

Acrobatic, Gymnastics or Gymnastics-Acrobatic (or reversed) Elements

- 1. A + B = A + C Note: The B acrobatic element must have flight to raise to C
- 2. B + B = B + C
- 3. B + C = B + D Gymnastics elements with
- 4. C + B = C + C and without flight, B or above
- 5. C + C = C + D will value raise.
- 6. D + C = D + D

For a series of 3 or more elements beginning with A + B + B, the 2nd and 3rd element will raise one level.

- \*7. A + B + B = A + C + C
- \*8. B + B + B = B + C + C
- \*9. C + C + C = C + D + D
- \*10. B + C + C = B + D + D
  - 11. B + B + B = B + C + C
  - 12. B + C + B = B + D + C13. B + C + C = B + D + D
  - 14. C + B + B = C + C + C
  - 15. C + B + C = C + C + D
  - 16. C + C + B = C + D + C
  - 17. D + B + C = D + C + D
  - 18. D + C + B = D + D + C
- 19. D + C + C + B = D + D + C + C (Etc.)

The value raising for dismount connections begins with B (flight) + B; A + B and A + C remain the same.

For longer dismount series the same principles as for series on the beam and dismount apply.

\*\*Elements requiring 2 second holds cannot be considered for value raising.

BONUS POINTS — 0.5 (See General Lecture for Specific Guidelines)

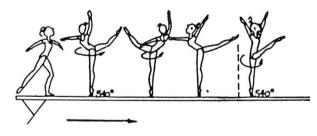
Originality	up to 0.2
Additional D	0.1
Virtuosity	up to 0.2

#### Originality:

The principle for original connections on beam remains valid:

- Three flight phase elements directly connected, two of which are minimum B, one of which is a natural C (series without value raising, as a mount or in exercise) = 0.1 Bonus Points (RV)
- 2. Dismount series: Two flight phase elements (minimum B) directly connected to a natural C dismount = 0.2 Bonus Points (RV).
- Dismount series: Two flight phase elements (minimum B) directly connected to a natural D dismount = 0.2 Bonus Points (NV).

### FIG CODE OF POINTS 1985-88 BALANCE EXERCISE



#### VALUE PARTS - 3.0

Competition IB	Competition II	Competition III
3 A @ .2 = 0.6	2 A @ .2 = 0.4	1 A @ .2 = 0.2
3 B @ .4 = 1.2	2 B @ .4 = 0.8	2 B @ .4 = 0.8
2 C @ .6 = 1.2	3 C @ .6 = 1.8	2 C @ .6 = 1.2
	(1 Natural C)	1 D @ .8 = 0.8
		(2 Natural C)

Deduction for using a value raised C where a natural C is required: 0.2

Value Parts 3.0(8) Value Parts 3.0(7) Value Parts 3.0(6)

#### VALUE RAISING FORMULAS:

Increase in value parts due to direct connections of difficulties:

Direct means: performance of elements/connections

- without pause
- without an extra step

Value raising beings with A-B connections. A elements cannot be value raised, and serve only as a connection

<sup>\*</sup>Changes or Additions from 1980 -84 Code of Points
\*\*FIG/WTC Interpretation applied internationally now
accepts elements with two second holds as valid for
value raising.

#### TIME — 1:10-1:30 (10 seconds to resume after fall) (FIG)

- 1. Begins when gymnast leaves floor or board
- 2. Stops when gymnast leaves BB (FIG)
- 3. If dismount occurs after sound of 2nd signal, 0.2 ded for overtime and the remainder of the exercise is evaluated including dismount and landing (FIG)
- 4. For Elite (FIG), a warning will be given 5 seconds prior to the time limit, and at the maximum time limit to communicate that the exercise is to be finished.

#### TIME — 1:10-1:30 (10 seconds to resume after fall) (JUNIOR OLYMPIC AGE GROUP)

- 1. Begins when gymnast leaves floor or board
- 2. Stops when gymnast leaves BB
- 3. If the gymnast has left the beam for the dismount before the final signal, no overtime deduction will be taken.
- 4. If the gymnast is on the beam when time is called, the judge stops judging the exercise from that point. No value part credit is given for elements performed after time is called. (Therefore, if the dismount value part is needed to fulfill compositional requirements appropriate deductions would be taken according to missing value part).
- 5. If a gymnast is overtime, deduct 0.2 for overtime plus 0.3 for no dismount.
- 6. No deduction for not having a B dismount would be taken.
- 7. A warning will be given 10 seconds prior to the time limit and at the maximum time limit to communicate that the exercise is to be finished.

#### \*\*FALL TIME — 10 seconds

- 1. If the fall time is exceeded, the exercise is considered terminated. All missing value parts and special requirements will be deducted.
- 2. Fall time is timed separately from the exercise time and is not calculated in the total time of the exer-
- 3. Fall time starts when the gymnast's feet or hands leave the beam. Fall time stops when the gymnast resumes movement on beam.
- 4. A warning will be given 5 seconds prior to the time limit (Not FIG).
- 5. After a fall, the exercise time continues with the first movement on the beam to continue the exercise.

#### Progressive distribution of elements. mount corresponding to the value of the exercise:

\*1. Mount easier than A 2. More than two beam passes in succession without difficulty of mini-

mum B each 0.1 \*3. Lack of a minimum of an A in each pass (not FIG)

each 0.1

Diversified, original composition of the exercise through the various value parts and connections:

Absence of special requirements -

1. Absence of acrobatic series with an element of flight

\*2. Abence of gymnastics series 3. Absence of full turn (360°) on one

4. Absence of leap or jump with great amplitude \*5. Dismount not corresponding to the

difficulty level of the exercise (at least a B)

0.2

0.5

0.2

1.0

0.2

0.2

0.1

0.1

#### In addition -

6. Too few direct connections of gymnastic and acrobatic elements

up to 0.2 7. Domination of acrobatics up to 0.2 8. One-sided choice of acrobatic or

gymnastic elements 9. Connections not corresponding to

up to 02. the difficulty of the exercise up to 0.2

\*10. Repetition of compulsory mount or dismount, or a connection of more than 3 compulsory elements in the exercise

each 0.3

0.5

0.2

0.1

0.5

each 0.2

Space and Direction:

1. General insufficient directional up to 0.2 changes

\*2. All acrobatics A,B,C,D elements predominantly in one direction

3. Insufficient change of working near and far from beam

Temo and Rhythm:

\*1. Uniform (monotonous) tempo during the entire exercise

up to 0.5 2. Uniform tempo during a long passage of the exercise each 0.1

General Faults:

1. No mount or dismount each 0.3 2. Two elements before the mount 0.2

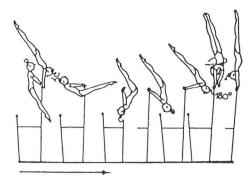
#### EXECUTION — 4.0

- Technique, Amplitude and Posture -General Faults of execution as listed in Code of Points
- Specific deductions applicable to Balance Beam:
  - 1. Support of a leg against the side surface of the beam

\*Changes or Additions from the 1980-84 Code of Points

\*\*FIG/WTC Interpretation applied to fall on or from beam. See Article 12, Page 103, 1. General, 3rd Paragraph.

#### FIG CODE OF POINTS 1985-88 UNEVEN BARS



#### VALUE PARTS - 3.0

Competition IB	Competition II	Competition III
3 A @ .2 = 0.6	2 A @ .2 = 0.4	1 A @ .2 = 0.2
3 B @ .4 = 1.2	2 B @ .4 = 0.8	2 B @ .4 = 0.8
2 C @ .6 = 1.2	3 C @ .6 = 1.8	2 C @ .6 = 1.2
	(1 Natural C)	1 D @ .8 = 0.8
		(2 Natural C)

Deduction for using a value raised C where a natural C is required: 0.2

Value Parts 3.0(8) Value Parts 3.0(7) Value Parts 3.0(6) VALUE RAISING FORMULAS:

Increase in value parts due to combinations, beginning with B  $\,+\,$  B

\*Direct means: without pause, intermediate swing, or beat on LB from inside or outside.

- 1. B + B = B + C2. C + B = C + C
- \*\*3. C + C = C + D (Conditions: Directional change (in, after or during 1st or 2nd element), grip change on same bar or flight from HB over LB)
- \*4. D + B = D + C or 2nd element), grip change on same bar or flight from
- \*5. D + C = D + D HB over LB)

NOTE: An element finishing in handstand on low bar is considered over the low bar

6. If more than 2 value parts (B,C,D) are directly connected then the value of the second and each thereafter raises one level. Original value determines whether you continue to raise.

$$B + B + B = B + C + C$$
  
 $C + B + B = C + C + C$ 

$$C+B+B=C+C+C$$

C + B + C = C + C + C - (Exception: Remains C)

$$C + C + B = C + D + C -$$
(with conditions)

C + C + C = C + D + D - (with conditions)

7. A value raised C as a connection cannot lead to D value raising.

\*8. Elements can be devalued due to incorrect technique. Elements devalued to a listed code element can value raise. An element devalued to an unlisted element cannot be used to value raise another directly connected element.

 Value raising is applied throughout the entire exercise, including mount and dismount connections. BONUS POINTS — 0.5 (See General Lecture for Specific Guidelines)

cific Guidelines)		
Originality Additional D	up to	0.1
Virtuosity	up to	0.2
COMBINATIONS (Composition) — 2.5		
<ul> <li>A. Progressive distribution of elements, mount corresponding to the value of the exercise:</li> <li>1. Exercise without high points (peaks)</li> </ul>		0.5
in progression of difficulties *2 Mount easier than A level	up to	0.2 0.2
B. Diversified, original composition of the exercise through the various value parts and connections:		<u>1.0</u>
Absence of special requirements -  1. Too short an exercise - Less than 10 elements		0.2
<ul> <li>2. Unpermitted number of elements on one bar - More than 4 elements</li> <li>*3. Less than 2 elements in total on LB</li> <li>4. Dismount not corresponding to the</li> </ul>	each	0.2 0.2
difficulty of the exercise (at least a B)		0.2
In addition - 5. Repetition of basic elements 6. Close bar work predominantly Lack of stretch of body through handstand 0.1 Lack of bar release 0.1 *USGF Interpretation: Class I - C level or better rel	up to up to	0.2
ment Class II - B level or better rel ment		
Class III - B level release elen	nent	
<ol> <li>One sided choice of element groups (B,C,D elements should come from the following: upward swings/cir- cles, kips, handstands, pirouettes, saltos, counter, grip change, and</li> </ol>		
flight elements and hechts) 8. Uncharacteristic bar elements *9. Repetition of compulsory mount or dismount in the exercise or a connection of more than 3 elements	up to each	0.2
C. Space and Direction:     1. Predominance of execution in one direction		0.5
Insufficient bar changes toward the		0 0.2

\*\* FIG/WTC Interpretation applied internationally

inside and outside of bars

2. Heaviness (execution fault)

high (less than 2)

1. Monotony in rhythm

D. Tempo and Rhythm:

3. Insufficient bar changes from low to

each 0.1

up to 0.2

up to 0.2

0.1

0.5

<sup>\*</sup> Changes or Additions from 1980-84 Code of Points

#### EXECUTION — 4.0

 A. Technique, Amplitude and Posture -General Faults of execution as listed in the Code of Points

B. Specific deductions applicable to bars:

openine dedderiene applicable to bare.	
1. Addition short support on apparatus	0.5
2. Extra swing (extra cast) or bounce	0.3
<ol><li>Touching apparatus or the floor</li></ol>	
- lightly	0.1
<ul> <li>moderately</li> </ul>	up to 0.3
<ol><li>Grasping the apparatus</li></ol>	0.5
5. Fall against the apparatus, support	
of both hands, support with one	
hand	0.5

#### **GENERAL FAULTS**

<ol> <li>Two elements before the mount (take off</li> </ol>	
from board)	0.2
2. No mount or dismount	0.3

\*BAR MEASUREMENTS (taken from the surface which supports apparatus)

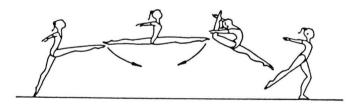
Height HB - 235 cm Height LB - 155 cm

Distance between bars - (minimum 60 (23-5/8") - maximum 105 cm (41-1/3")

Bars may go closer than 60 cm, but any bar used in competition must close to at least 60 cm)

Height of board - 20 cm +/- 1 cm

#### FIG CODE OF POINTS 1985-88 FLOOR EXERCISE



#### VALUE PARTS — 3.0

Competition IB	Competition II	Competition III
3 A @ .2 = 0.6	2 A @ .2 = 0.4	1 A @ .2 = 0.2
3 B @ .4 = 1.2	2 B @ .4 = 0.8	2 B @ .4 = 0.8
2 C @ .6 = 1.2	$3 \cdot C \otimes .6 = 1.8$	2 C @ .6 = 1.2
	(1 Natural C)	1 D @ .8 = 0.8
		(2 Natural C)

Deduction for using a value raised C where a natural C is required: 0.2

Value Parts 3.0(8) Value Parts 3.0(7) Value Parts 3.0(6)

#### VALUE RAISING FORMULA:

Increase in value parts due to direct or indirect connections of difficulties:

\*Direct means: - -\*performance of acrobatic elements with flight phase without hand support "from A or with flight phase and hand support from B" and gymnastics elements from B

 without a pause between the landing of the first and take-off of the second element

 without an extra step, that means the free leg of the first element is placed immediately as the standor take-off leg for the following element.

Indirect means:

 acrobatic A elements such as round off, flic flac, etc. are performed between acrobatic elements with flight phase and without hand support.

\*Value Raising on Floor Begins With:

 Acrobatic A elements with flight phase and without hand support in same series (direct or indirect)

- Gymnastic B elements (direct only)

- \*Gymnastic series or acrobatic flight elements with hand support from B (direct only):
- \*Gymnastic/acrobatic series (or reversed) from gymnastic B elements/acrobatic A flight elements without hand support or B flight elements with hand support

1. 
$$A + A = A + B$$

2. 
$$A + B = A + C$$
  
3.  $B + A = B + B$ 

4. 
$$B + B = B + C$$

5. 
$$C + A = C + B$$

6. 
$$C + B = C + C$$

\*7. 
$$C + C = C + D$$
 Value raising from C to D begins with  $C + C$ 

Except: 1. in a series of 3 or more <u>directly</u> connected acrobatic flight, with or without hand support elements the 2nd and 3rd elements will raise one level (value raising to D begins with B + C):

$$B + B + C = B + C + D$$
  
 $C + B + C = C + C + D$ 

$$C + C + B = C + D + C$$

$$B + C + B = B + D + C$$
Also indirectly connected

2. in a series of 3 <u>indirectly</u> connected elements, raising to D requires a minimum of two C elements (value rais-

ing to D begins with 
$$C + A + C$$
):  $A + A + C = A + B + C$ 

$$A + C + A = A + C + B$$

$$A + B + C = A + C + C$$

$$B + C + A = B + C + B$$

$$B + B + C = B + C + C$$

$$C + A + C = C + B + D$$

$$C + B + C = C + C + D$$

$$B + C + C = B + C + D$$
  
 $C + C + C = C + D + D$  (Etc.)

$$8. D + C = D + D$$

9. 
$$A + A + A = A + B + B$$

10. 
$$A + B + A = A + C + B$$

11. 
$$A + B + B = A + C + C$$

12. 
$$B + B + B = B + C + C$$

Indirectly connected series - the 2nd and 3rd salto will raise one level

BONUS POINTS — 0.5 (See General Lecture cific Guidelines)	e for Spe-	from the following element groups): up to 0.2 a. acrobatic elements with and with-
Originality Additional D Virtuosity	up to 0.2 0.1 up to 0.2	out flight phase in forward, side- ward or backward movement b. gymnastic elements - turns, leaps, jumps, and hops, steps
Originality: The principle for original connections on floo valid:	r remains	and running combinations - bal- ance elements in stand, sitting and lying positions, arm swings and body waves
<ol> <li>Acrobatic series with an A salto and A D sa B.P. (RV)</li> <li>Acrobatic series with a B salto and a D sa B.P. (NV)</li> </ol>	alto = 0.2	10. Unaesthetic, incompatible elements each 0.1 *11 Repetition of compulsory dismount or mount in the exercise or a compulsory connection of more than 3
<ul> <li>3. Dismount series - acrobatic series con salto = 0.1 B.P. (RV)</li> <li>4. Dismount series - A or B salto + D salto = (NV)</li> </ul>	_	elements each 0.3 C. Space and Direction: 0.5 1. Insufficient use of FX area up to 0.2 2. Predominance of straight directions up to 0.2
A. Progressive distribution of elements and last series not corresponding to the level		*3 Lack of passages covering great distance (gymnastics or gymnastic/acrobatic) (in total) up to 0.2 4. Insufficient change of elements near
of the exercise:  1. Progressive distribution of elements (high points)	0.5 up to 0.2	to and far from the floor (level change) up to 0.2  D. Tempo and Rhythm:  0.5
<ul><li>-Absence of gymnastics peaks</li><li>-Absence of acrobatic peaks</li><li>2. Absence of natural acrobatic B ele-</li></ul>	0.1 0.1	Excercise without music 0.5     Music and movements not in harmony in a part each 0.1
ment (not FIG) 3. Absence of natural acrobatic C element, with flight (not FIG)	0.1 0.1	3. Music/movement not in harmony throughout entire exercise  *4. Music with voice during part each 0.1  *5. Music with voice during entire exer-
B. Diversified, original composition of the exercise through the various value parts and connections:	1.0	cise 0.5 6. More than 4 measures of introduction 0.2
Absence of special requirements: Definition of series: Each acrobatic series must consist of		A. Technique, Amplitude and Posture - General Faults of execution as listed in Code of Points
at least three acrobatic elements, one of which is salto (i.e., round-off, flic-flac, salto backward). *1 Absence of one acrobatic series (3 different acro series)	each 0.2	B. Specific deductions applicable to Floor Exercise:     1. Stepping out of bounds or touching outside of the boundary with any part of the body
*2. Absence of series with 2 saltos or D salto  *3. Absence of one gymnastic B	0.2	*Changes or Additions from 1980-84 Code of Points
*4. Absence of B element in last series or last element performed	0.2	February 20, 1986
Acceptable Variations: -Acrobatic dismount series closes with B or more difficulty, followed by an A -Acrobatic dismount series closes with A or more difficulty, followed by		* Original Lecture Material & Transparencies Jackie K. Fie, FIG WTC Vice President * Complied by: Cheryl Grace Review Board Chairman *FIG CODE OF POINTS, 1985 Edition * USGF WTC Decisions & Interpretations
a more difficult acrobatic or gymnastic element from B		for Elite and Junior Olympic Program  Review Board:
In addition:  7. One sided choice of acrobatic elements and connections	up to 0.2	Joan Aschenbrenner Dale Brown Delene Darst
ments and connections 8. One sided choice of gymnastics elements and connections 9. Value parts from only 1 structure group (Not FIG) (B,C,D must come	up to 0.2 up to 0.2	Jackie Fie Joanne Pasquale Audrey Schweyer Sharon Valley

BEFORE THEY GOT THEIR HANDS ON THE GOLD, THEY GOT THEIR HANDS ON US.

The Official, and Only, Supplier of Gymnastic Equipment to the 1984 Summer Olympic Games. American

AMF

## Bias Correction Factors: A Proposal To Minimize Unwanted Pattern Bias In International Competitions

By Bill Roetzheim and Ted Muzyczko September, 1985

he current men's gymnastics judging rules and procedures provide a fair way of deciding team championships and individual winners in international competition. However, this is true only if pattern bias, as sometimes dictated by national interests, is minimized or eliminated. Our proposal is based on many past studies. Our proposal suggests a method of assuring the use of current or any body of rules in such a way that *unbiased judging is encouraged* by all judges.

The fair implementation of the current rules is based on the following assumptions:

- That the Superior Judge is competent, well trained, impartial and an active auditor. He has considerable responsibility and authority. We believe his performance should be periodically checked.
- 2. That the panel of judges is competent, independent in their assessments and impartial.
- 3. That the individual judge score deviations from, the average are randomly distributed and are based on human error, not unwanted pattern bias. For a given team or even entire field of competition, ideally, on the average, a judge should have as many scores above the average as below the average. Further, his deviation from the average should be very low.
- 4. That the average score, as described above, is the closest measure of the "truth of a performance".

In spite of the lack of rigorous proof, we are persuaded that if a given judge is high on a given team and low on other teams near in score, to that team, especially by high margins, and if the same judge shows low deivations as well as a random distribution about the average of other teams, an investigation is warranted.

In summary, it is one thing to identify a problem, but quite another to be certain of assignable causes and yet still another to apply corrective action. But is gross score variations can be brought more closely in line, by the use of our proposal or other means, we will have accomplished the initial task of this first paper.

Other methods are discussed in reference 3 on Evaluating Mens Gymnastics Judging by Ted Muzyczko. These include the use of matrix tables, control charts, reliability, error analysis etc.

With the use of video and computers, large data banks should be available.

In any case, an event may be viewed "as a sample". Sampling theory could be employed. The "average score" has a special and specific meaning in mens gymnastics. Of the four scores given by the judges for each performer, the high and low scores are discarded and the two middle scores are averaged and used if they are within a specified range. The base score average is computed by averaging the two middle scores with the Superior Judge's score.

tatistics work best with large numbers. Sometimes, a given event performed by a given team will not have large numbers, i.e. six competitors. Nevertheless, if an **obvious** pattern is shown that represents bias, some action must be taken to correct this. If a judge is higher than the average on every competition from "his

team," this could be unwanted pattern bias. Further, if a team that is close in score to "his team" is evaluated with consistently lower scores, this also could represent an unwanted pattern bias.

There is an assumption here that has not been subjected to rigorous proof: consistent high scores for a given team, and also the consistent low scores for a team or teams close to the given team represent unwanted pattern bias. We are aware that correlation does not necessarily mean casuality. Full demographic studies would be necessary. A judge may be high on eveyone or low on everyone. Although this type of pattern bias is not necessarily unwanted, it is away from the "ideal model" of random, low deviation distributions about an average. Training or point of view preference may be involved. See Ted Muzyczko's paper on Pointers, Counters and Magic Numbers.

We may also be forcing judges to be as close to the average or base score as possible. This may stifle independent judgements. And if the Superior Judge can "control the average," is he alone determining the outcome? But we believe that given a choice between staying close to an average and unwanted pattern bias, we would choose the former. Further large positive deviations from an average would still be allowed, if randomly distributed and countered with nearly equal negative deviations.

Sometimes mistakes are made, they are part of the process; but errors should be randomly distributed and not show a pattern.

A skilled, biased judge can easily stay within the FIG score allowable averages and yet exert considerable influ-

ence on the outcome of the competition. For example, if a judge is .05 higher than the average, (pulling up — but counting as one of the two averaged middle scores) the outcome could be as follows:

One Event  $\times$  Five Men  $\times$  .05 = + .25 Two Events  $\times$  Five Men  $\times$  .05 = + .50 Six Events  $\times$  Five Men  $\times$  .05 = +1.5 Twelve Events  $\times$  Five Men  $\times$  .05 = +3.0

Note that these deviations can be **doubled** if the judge or judges involved "push down" on teams that are close to them in a competition.

Sometimes shrewd methods can be attempted, such as the use of confederates. This forces opposing judges to employ similar "countering strategies". THE PATH TO THE ONE RIGHT SCORE SHOULD NOT BE TWO WRONG SCORES.

A number of methods have been proposed and are in use to combat blatant bias. These include:

- Improved training procedures
- Open scoring
- Discussions at judges courses prior to the competition
- Discussions and energetic interactions by Superior Judges
- Interjections by the Directors of the Competition
- The threat and use of warning cards and dismissals. Still some bias persists.

e propose the following approach. When a judge as a part of a panel of four evaluates "his team," and the two other teams that are closest in score to "his team," he must show little or no pattern bias. To encourage him to give random, non-biased

scores, we suggest the use of a BIAS CORRECTION FACTORS that would be established after all teams have competed.

The process is summarized as follows:

- After the Compulsory Exercises Session (1A), judges that are representatives from countries that have a full team competing will have their scores statistically analyzed, relative to the averages of their panels.
  - When their team and the two that are closest in score or that finish just ahead and just behind their team compete, the judges scores should be near the average scores with low deviations and should show little pattern bias. A judge or confederate should not "pull-up" on a team and "push down" on the two nearest scoring teams.
- The six scores that the judge gives competitors from "his country" on an event will be determined to be above the average (positive deviation), or below the average (negative deviation). These deviations will be listed after the average scores as shown in the following examples (1, 2 and 3).

Since a certain amount of human error is involved, the highest positive deviation (for a given team) will be eliminated from the study. In a like fashion, the largest negative deviation (lower than the average for a judge's country) will be eliminated.

For the remaining four scores, the deviations will be added algebraically and the net difference, positive or

negative, will be shown as a summation. Note, a large positive deviation can mean a strong leaning or "pull-up" for that country and a large negative deviation a strong leaning or "push down" against the other country. This net positive deviation would be subtracted from the judges team scores as shown in examples 1 and 2.

3. In a like manner the "push down" effect on the two closest scoring teams or the teams immediately ahead and behind their team will be analyzed for pattern bias.

Of the six scores, the largest positive and negative deviations would be discarded. If the net deviation is zero or positive, it would be discarded. If however, it is a negative ("push down"), then the net deviation would be added to the other two teams respectively.

- It is critical to apply the Bias Correction Factors to all three teams involved:
  - Subtract the net postive deviation from "his team"
  - Add the next negative deviation to the two teams closest in score such as the second and third place teams, in the case of the first place finisher and the teams immediately ahead and behind in other cases. Of course, the last place team would be considered with the two teams immediately ahead.
- 5. The judge's scores with significant and persistent deviations from the average and/or base score would be carefully investigated in an attempt to ascertain assignable causes. Some rational explanations may be forwarded. However, if not, unwanted pattern bias may have been exhibited. The potential effect on team placements would be considered.
- 6. The FIG (TC) could recommend:
  - Discussion with individual judges
  - Applying the Bias Correction Factors to the team scores
- 7. The same approach could be used for Competition 1B, Optional exercises.

#### **Examples**

xamples 1, 2 and 3 show that in the analysis of Judge 1 (J-1), the bias can be strong, moderate or slight/none respectively. In these examples the influence of the Superior Judge is *indirect*. Alternatively the above approach may be used, but the final deviations taken from the Base Score. In that way the influence of the Superior Judge is

Score. In that way the influence of the Superior Judge is *indirect*. See example 4.

Note the examples are for "pull-up" or positive deviations only. Example 5 shows how the "push down" or net negative deviation approach is used with Bias Correction Factors.

This approach is simple with the use of computers. It has the following positive features:

- Judges, knowing that their scores will not only be analyzed, but that the net positive deviation could be subtracted from their team score, and that net negative deviations would be added to other team scores, will be encouraged to maintain low pattern bias.
- the awareness of the other judges (i.e. those not having a full team represented) that their scores are being closely analyzed should be a positive factor in maintaining a random distribution of scores.
- There will be less pressure from the crowd, athletes, coaches and delegations, since they realize that pat-

- tern bias will have a detrimental affect on the final team score.
- Severe examples of pattern bias will be cause for individual national concern and the problem can be handled by the individual federations rather than the FIG. No yellow cards need by issued.
- All four judges participate in the determination of the final score.
- Confederates can be discovered.
- Finalists may be more accurately scores.

These are some negative factors to this approach. These include:

- Bias Correction Factors cannot be completely applied until after the competition. Of course some individual correction factors could be applied after each event (pull-up corrections). Further the Superior Judge's monitor could show deviations immediately with the display of all four scores.
- The credibility of the sport may be hurt and it may be difficult to explain to the crowd or layman.
- Judges may be intimidated to conform to the averages and this may stifle independent judgements.
- There is considerable pressure on the Superior Judge to himself be fair, watch the four scores to be in conformity and to move the meet along. Superior Judges evaluations are discussed in a later section of the paper (See examples 6 and 7).

We recommend the following steps:

#### **Phase 1 Introduction**

The concept is explained

#### **Phase 2 Post Competitions**

Past major competitions are studied. Refinement would be suggested

#### Phase 3 Study and Introduction

An analysis of all judges scores be made at the next multinational competition. After the Compuslory Competition, the Technical Committee could look at the analysis and use it as a basis for further discussions with the judges. After the Optional Competition, a similar approach would be used by the Technical Committee. This committee would study the effect this system would have on the final team placement of the participants in this competition.

#### **Phase 4 Adaption**

The refined Bias Correction Factor approach would be used at the next major multi-national competition.

#### **Phase 5 Dual Meet**

If the methods appear to be working, they could be tried on a pilot scale at dual meet competitions.

This program cannot eliminate all biases. Certainly, some nations can coerce other nations into doing their patterned judging. However, once the patterns are exposed, the same approaches might be used.

#### Other Approaches

Biases are complex and interrelated. Some other thoughts on minimizing bias include the following:

 Do not use judges from the countries that have the top three finishers for the Individual All-Around. This

- would be similar to the use of neutrals in the Finals Competition (individual).
- Eliminate as many "up to" deductions since this is a "license to mitigate."

Examples include Code Article 29-3, non-commensurate dismounts (up to .3); Article 29-6 - D, C and B parts not built to serve the purpose of the exercise; 29-9, combination resembling the compulsory exercise too strongly and Article 32, points 4, 5, 7a, 7b, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19; Article 33.

Actually, the current code is much improved over the last one in this respect, but we recommend changes to the above. Some guidelines are already in use in the USA (reference - USA Interpretations to the FIG Code, NGJA, September, 1985).

— The Superior Judges must not only be of unquestionable honesty, but must be periodically checked for their strict adherence to objective evaluations.

One approach toward evaluating the performance of a Superior Judge in a competition is to check his deviations and random scatter for certain teams. His deviations from the averages, Example 6, or from the base scores in Example 7 could be studied. If the scores are consistently patterned, then either the panel is biased or possibly ignorant of certain interpretations (and he has control over the panel) or he is. If necessary, he may be asked to defend his position to the Directors of the Competition. Often the Superior Judge is burdened with pressures to move the competition along.

The Superior Judge has considerable authority and an awesome responsibility.

With our current video technology it is possible for the Superior Judges to study podium training video tapes prior to the team competitions. (Competitions 1A and 1B). They would then be better prepared to deal with new moves, new techniques and tricky interpretations. Of course, they should know the field of competitors prior to the competition. Every FIG TC member should be given an appropriate standard video recorder and color TV monitor for use in preparing for competitions (U.S. cost would be under \$700).

We hope that this paper has stimulated interest in a most important subject. What are your thoughts? Can these approaches be applied to Women's Artistic Gymnastics, Rhythmics or even other subjective sports such as diving and figure skating?

## EXAMPLE 1 TEAM COMPETITION PARALLEL BARS (STRONG BIAS)

Judge-1 = J-1 (His team Is Competing)

Exercise	SJ	J-1	J-2	J-3	J-4	Average	Difference
(1)	9.2	9.4	9.1	9.3	9.0	9.2	+.20 -discard
(2)	9.3	9.5	9.2	9.2	9.4	9.3	+.20
(3)	9.4	9.6	9.3	9.3	9.5	9.4	+.20
(4)	9.5	9.7	9.4	9.4	9.6	9.5	+.20
(5)	9.6	9.7	9.7	9.6	9.6	9.65	+.05
(6)	9.9	9.9	9.9	9.9	9.9	9.9	0.00 -discard

#### Summation

Bias Correction Made From Team Finals	
Unadjusted Team Score	294.30
Bias Correction Subtraction	65
Final Corrected Team Score	293.65

In this example J-1 or Judge 1 shows a strong positive or "pull-up bias of .65 even, after the highest deviation

+ .20 and lowest deviation negative 0.00 are discarded. The highest and lowest deviations or differences from the average of the two middle scores are discarded to take into account human error and sample size.

## EXAMPLE 2 TEAM COMPETITION POMMEL HORSE (MODERATE BIAS) (Judge-1 - His Team is Competing)

Exercise	SJ	J-1	J-2	J-3	J-4	Average	Difference
(1)	8.8	8.6	8.8	9.0	9.0	8.9	30 -discard
(2)	9.0	9.1	9.0	8.8	9.1	9.05	+ .05
(3)	9.2	9.3	9.2	9.2	9.2	9.2	+ .20
(4)	9.4	9.3	9.3	9.6	9.4	9.35	05
(5)	9.6	9.7	9.6	9.6	9.7	9.65	+.05
(6)	9.7	9.9	9.8	9.7	9.7	9.75	+.15 -discard
							+.15

#### Summation

Bias Correction Made From Team Finals	
Unadjusted Team Score	295.00
Bias Correction	15
Final Corrected Team Score	294.85

In this example a moderate team bias of .15 is shown by Judge -1 (J-1). Note, the highest positive and the lowest negative differences are discarded.

#### **EXAMPLE 3**

### TEAM COMPETITION VAULTING (NO BIAS)

(J-1 His Team Competing)

							J	l-1
Exercise	SJ	J-1	J-2	J-3	J-4	Average	Diffe	rence
(1)	8.9	8.8	9.0	8.8	9.0	8.9	10	-discard
								diff
(2)	9.1	8.9	9.1	9.0	9.0	9.0	10	
(3)	9.2	9.3	9.3	9.3	9.3	9.3	0.00 -	discard
(4)	9.3	9.4	9.2	9.4	9.2	9.3	+.10	
								diff
(5)	9.5	9.5	9.6	9.4	9.5	9.5	0.00	
(6)	9.7	9.6	9.7	9.6	9.7	9.65	<u> </u>	
			Sur	nmatio	on		15	
	justed							294.10
Bias								
Made	Since	e It Is	Negat	ive				
Final	Team	Score						294.10

In this example Judge 1 (J-1) shows no positive bias (pull-up) for his team. In fact a small amount of negative bias is observed, which is discounted and not added to the team score.

#### **EXAMPLE 4**

#### TEAM COMPETITION

#### PARALLEL BARS (STRONG BIAS)

Judge-1 = J-1 (His Team Is Competing)

J-1 Base

								0 1 2000
Exercise	SJ	J-1	J-2	J-3	J-4	Ave	Base Score	Score Diff
(1)	9.3	9.4	9.1	9.3	9.0	9.2	9.25	+.15 -discard
								diff
(2)	9.4	9.5	9.2	9.2	9.4	9.3	9.35	+.15
(3)	9.5	9.6	9.3	9.3	9.5	9.4	9.45	+ .15
(4)	9.6	9.7	9.4	9.4	9.6	9.5	9.55	+.15
(5)	9.7	9.7	9.7	9.6	9.6	9.65	9.675	+.025
(6)	9.9	9.9	9.9	9.9	9.9	9.9	9.9	0.00 -discard
								diff
			5	Summ	ation			+ .475
Bias	Corre	ection	Mad	e Fro	m Tea	am Fin	als	
Una	294.30							
Bias	Corre	ection	Subt	ractio	n			475
Fina	l Corr	ectec	Tear	n Sco	re			293.825

In this example the Superior Judge is more in agreement with Judge 1 (J-1) compared to example 1. By using the **Base Score**, rather than the average, to establish deviations, the influence of the Superior Judge contributes **directly** to the Bias Correction Factor of .475. This factor is lower than that shown in example 1 because of the Superior Judge's influence.

#### **EXAMPLE 5**

#### **TEAM COMPETITION**

#### **VAULTING (NEGATIVE PATTERN BIAS)**

(J-1 - Team Immediately Ahead of His Team Competing)
J-1

							J	-1
Exercise	SJ	J-1	J-2	J-3	J-4	Average	Diffe	rence
(1)	8.9	8.8	9.0	8.8	9.0	8.9	10	
(2)	9.1	8.9	9.1	9.0	9.0	9.0	10	
(3)	9.2	9.3	9.3	9.3	9.3	9.3	0.00 -	discard
								diff
(4)	9.3	9.1	9.3	9.3	9.4	9.3	20	
(5)	9.5	9.2	9.6	9.5	9.5	9.5	30 -	-discard
								diff
(6)	9.7	9.6	9.7	9.6	9.7	9.65	<u>05</u>	
	Summation							
Unad	ljusted	Team	Scor	е				294.10
Bias		+.45						
Team	Score	e`	,					
Final	Team	Score	,					294.55

This is an example of a judge (J-1) judging the team that is immediately ahead of his team.

#### **EXAMPLE 6**

#### **TEAM COMPETITION**

#### POMMEL HORSE

SUPERIOR JUDGE

							S	J Ave
Exercise	SJ	J-1	J-2	J-3	J-4	Average	Diff	erence
(1)	8.8	8.6	8.8	9.0	9.0	8.9	1	-discard
(2)	9.0	9.1	9.0	8.8	9.1	9.05	05	
(3)	9.2	9.3	9.2	9.2	9.2	9.2	0.00	
(4)	9.4	9.3	9.3	9.6	9.4	9.35	+.05	-discard
(5)	9.6	9.7	9.6	9.6	9.7	9.65	05	
(6)	9.7	9.9	9.8	9.7	9.7	9.75	05	-
			Sur	nmatio	on		- 15	

In this example, the Superior Judge's differences (deviations) from the average of the two middle scores are tabulated. Here a -.15 deviation is shown.

### EXAMPLE 7 TEAM COMPETITION POMMEL HORSE SUPERIOR JUDGE

						0000		SJ
_							Base	Base Score
Exercise	SJ	J-1	J-2	J-3	J-4	Ave	Score	Difference
(1)	8.8	8.6	8.8	9.0	9.0	8.9	8.85	05 -discard
(2)	9.0	9.1	9.0	8.8	9.1	9.05	9.025	025
(3)	9.2	9.3	9.2	9.2	9.2	9.2	9.20	0.00
								card
(4)	9.4	9.3	9.3	9.6	9.4	9.35	9.375	+.025-discard
(5)	9.6	9.7	9.6	9.6	9.7	9.65	9.625	025
(6)	9.7	9.9	9.8	9.7	9.7	9.75	9.725	<u>025</u>
	075							
In thin	01/0	mnl	a +h	~ C.	ınar	ior I	udaa'a	differences

In this example, the Superior Judge's differences (deviations) from the BASE SCORE or average of the two middle scores and his scores are tabulated. The final deviation is lower – .075 compared to Example 6 (– .15) since his score is part of average used or BASE SCORE.

References

- Doug Hills, Proposal to Reduce Bias Communication to Bill Roetzheim, May 16, 1985.
- 2. Ted Muzyczko, Minimizing International Bias, NGJA Newsletter 1985
- 3. FIG CODE OF POINTS, 1985
- 4. USA Interpretations, NGJA, September, 1985

## Men's Artistic Gymnastics Championships Of The USA Team Selection Procedures

- I. **Qualification** Championships of the USA
- A. The 1986 Championships of the USA are scheduled for June 19-22, 1986 in Indianapolis, Indiana.
- B. Athletes will qualify to the USA Championships from five (5) qualifying meets on May 17-18, 1986. Exception: those who score 108 in an approved meet other than the Regional Qualifying Meet are automatically qualified.

The Men's Program Administrator will certify these approved meets. This certification requires that Competition I rules be used prior to the Regional Meets. Competition II will be used at the Regionals. Also at least two nationally certified judges will be required per event. More than one club/program must be in attendance.

The Regional meet sites are: UCLA, University of Oklahoma, University of lowa, Great Lakes Gymnastics, Southern Connecticut State University. Qualifying scores will be called in with results sent later to: Robert Cowan, Men's Program Administrator.

- C. For compulsories in the Championships of the USA there will be 72 gymnasts. There will be two sessions with 36 gymnasts competing in each. These will be assigned randomly by draw to a session. For optionals, the top 36 scores from compulsories will compete in the later session. In case of a tie for 36th, the higher event compulsory score shall compete in the second session.
- D. All-Around ranking will be determined from the compulsory-optional session. There will be an individual event finals with 8 athletes per event. Finals will include the event score and 50 percent of the combined compulsory and optional score.
- E. The Senior National Team will be the top 18 from the combined compulsory and optional session. Ties will not be broken.
- F. The Senior Development Team will be the next top six who do not make the Senior team and are under the age of 20. The next four under the age of 18 will complete the Senior Development Team of 10. Ties will not be broken.

- G. In case of an injury, a gymnast may be petitioned on to the National Team by the Men's Program Committee.
- H. Petitions to the USA Championships will be accepted and should be sent to the Men's Program Administrator.
- II. Qualification Goodwill Games
- a. The Goodwill Games are scheduled for July 8-20, 1986. Competition will occur on July 13, 14 and 15. This event will take place in Moscow, USSR. Additionally, there will be exhibition in Leningrad on July 20.
- B. Athletes will qualify to the Goodwill Games by placing in the top finishers from Championships of USA in Indianapolis.
- C. Athletes who attend the Goodwill Games will be selected to compete in an International Dual Meet in W. Germany on July 23 which will be followed by a trip to Italy (Capri) for an exhibition.

- III. **Qualification** United States Olympic Festival
- A. Competition at the U.S. Olympic Festival will be on July 31 and August 2 in Houston. Texas.
- B. 12 Senior Athletes in rank order from Championships of USA (including the senior Development team) will be invited to this competition.
- IV. **Qualification** South American Tour
- A. The South American tour to Venezuela and Brazil for exhibitions and training camps will occur from August 10-22, 1986.
- B. The next 10 athletes in rank order on the Senior Team from Championships of USA not attending the Goodwill Games will be selected to travel to South America.
- V. **Qualification** Other events including the Pacific Alliance and International invitations will be assigned to National Team members as outlined by the Men's Program Committee.

## 1986 U.S. Olympic Festival Qualification

- A. The 1986 U.S. Olympic Festival (previously the National Sports Festival) is scheduled for July 27-August 4, 1986 in Houston, Texas.
- All athletes must be registered with the USGF prior to competition.
- C. Selection:
  - 1. Men

The top twelve (12) Senior gymnasts in rank order, from the USGF Chmpionships of the USA, June 19-22, 1986 in Indianapolis, Indiana and the top twelve (12) Junior gymnasts in rank order from the Junior National Team Winter Testing Program. Total: 24

- 2. Women
  - The top twenty four (24) elite Senior gymnasts in rank order from the USGF Championships of the USA, June 19-22, 1986 in Indianapolis, Indiana. If any decline, rank order to fill the remaining positions first from remaining Seniors, then Juniors. Total: 24.
- 3. Rhythmic

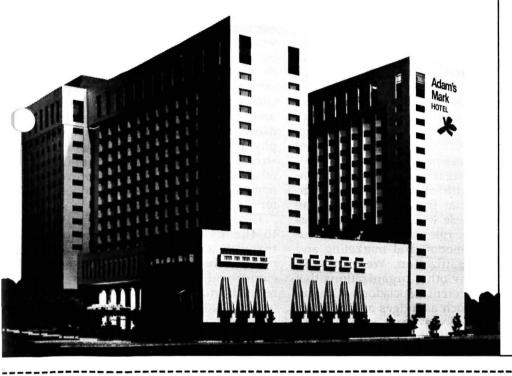
The top six (6) Junior gymnasts of international age and the top ten (10) Senior gymnasts from the Rhythmic Championships of the USA, April 18-20, 1986 in Los Angeles, California. Total: 16

### 1986 USGF CONGRESS

Once again, the USGF will present an outstanding program, featuring the finest clinicians and professionals in the sport. The 1986 Congress will provide you with essential, useful information on coaching technique, rules interpretation, running a successful, profitable operation, and more.

The highlights of the 1986 Congress in St. Louis:

- The latest on Safety Certification
- **New Rules and Code interpretation**
- Lecture/Demonstrations by top technicians
- Videotape skill analysis for coaches, judges



#### 1986 USGF Congress— Facts at a Glance

Date: September 24-28

Site: Adam's Mark St. Louis Hotel Fourth and Chestnut St. Louis, Missouri 63102

(314) 241-7400

When making reservations, ask for "1986

USGF Congress special rates."

Sufficient rooms are reserved for Congress up

to August 10, 1986.

Reserve early to assure room and special dis-

count rates.

Travel: Special airfare discounts off standard coach

rates are available.

Fee: \$55 for USGF professional members before Au-

gust 10, 1985.

\$65 for USGF professional members after Au-

gust 10, 1985.

\$75 for non-USGF professional members be-

fore August 10, 1985.

\$85 for non-USGF professional members after

August 10, 1985.

- Fee Includes: Free entrance to all lectures, master clinics, demonstrations, open meetings and general assembly.
  - Final Awards Banquet and Dance

Special Offer: Caribbean Cruise for Two!

During the final banquet a drawing will be held for a fantastic week-long cruise for two to the Caribbean aboard the U.S.S. Norway! So block off your calendar for September 24-28, 1986, and register for the 1986 USGF Con-

gress today!

Registration: Fill out the registration form below and mail, along with your registration fee,

1986 USGF Congress U.S. Gymnastics Federation 1099 N. Meridian, #380 Indianapolis, IN 46204

#### '86 USGF CONGRESS REGISTRATION FORM

Name	Da	te
Home Address		
City	State	Zip
Phone (Day)	am ☐ Rhythmic Progra	
Coach Judge Club Owner/		
PRIMARY INTEREST/PURPOSE FOR A	ATTENDING CONGRESS	

Congress Fee: \$75.00 per person. \$85.00 after August 10th. \$20 off Congress Fee for **USGF** Professional Members.

USGF PROFESSIONAL MEMBERSHIP #

Please return this registration form with check for fee to USGF Congress: 1099 N. Meridian, Suite 380 Indianapolis, IN 46204

### Coming In April . . .

# 1986 McDonald's USA/USSR Gymnastics Challenge

April 26-27, 1986 The Centrum Worcester, MA





Hosted By:





# Followed By: USA/USSR Tour

April 29 . . . New Haven Coliseum New Haven, Conn.

May 2 . . .
Jacksonville Memorial
Coliseum

Jacksonville, FL

May 4 . . . Nassau Coliseum New York

For more information, call 317-638-8743 after March 1.