NISS/SAMSI Affiliates Annual Meeting
Chicago, IL

Alan F. Karr

National Institute of Statistical Sciences

April 23, 2010

NISS
The Statistics Community Serving the Nation

Outline

NISS
The Statistics Community Serving the Nation

NISS Happenings: 2009–10

6/09	Re-designed web site goes live
6/09	ITSEW 2009 in Tallbërg Sweden
Summer/09	6 new postdocs join NISS
8/09	Ram Gnanadesikan receives 2009 Sacks Award
8/09	Vijay Nair and John Rolph receive 2009 Service Awards
11/09	Karen Kafadar, Fritz Scheuren elected to Board of Trustees; Jim Landwehr, Linda Young re-elected

Events at NISS since April 2009   NISS Research   The Affiliates Program   NISS: Moving Forward
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Events at NISS

More NISS Happenings: 2009–10

5/09–4/10 Development Feasibility Study (more later)

1/10 NISS Fund launched

1/10 David Yang (M.S. Statistics, U KY) joins NISS as ESSI-based employee

2/10 Richard Smith (STOR, UNC) named director-designate of SAMSI

2/10 Work on Project Talent begins

3/10 Special issue of *JPC* devoted to papers from 5/08 NISS/NCHS workshop *Data Confidentiality: The Next Five Years*

NISS Happenings: Upcoming

1/1/10–6/30/11   Nell Sedransk transitions to DC base, leading stronger, more focused NISS DC presence

4/10   Search for associate director (NC-based) of NISS announced

6/1/10   XXX joins NISS as assistant director for YYY

8/10   NISS JSM events celebrating 2010 dual anniversary

20/10/2010   World Statistics Day (more later)

2/11   SAMSI renewal proposal due to NSF (more later)

2009 Turkey Fry

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New Projects and People

New Projects–1

ORCA Assessing Online Reading Comprehension (funding: IES; lead institution: UConn). Four major goals:

1. Develop three different types of valid and reliable assessments to measure ORC
2. Evaluate the internal assessment characteristics for each instrument type to inform decisions about which is most useful and practical for schools
3. Evaluate the extent to which performance on each format is associated with four measures of contextual validity
4. Estimate utility and practicality of each instrument in the eyes of key decision makers

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New Projects and People

New Projects–2

Project Talent Revival and follow-on to 1960
                congnitive/interest/self-assessment study of 400K
                students in grades 9, 10, 11, 12 (more later)

Postdoctoral Survey Research Program supported by XXX:
                announcement imminent

Other initiatives in early stages of development

New Projects and People

Project Talent: Some Facts and Figures

- Main assessment in 1960—374,000 students in grades 9–12
  - Aptitude/ability in language, math, abstract and mechanical reasoning, creative thinking, clerical and perceptual processing, spatial visualization
  - 394-item background questionnaire: interests in occupations and activities, personality traits, demographic information, family background, health, current activities in and outside school, educational experience and plans, career/military/family plans
- 987 high schools nationwide, plus 200 affiliated middle schools
- Follow-ups 1, 5 and 11 years after high school

Events at NISS since April 2009   NISS Research   The Affiliates Program   NISS: Moving Forward
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New Projects and People

A Look at the Questions

1. Which of these is made of glass?
   - A. Tree
   - B. Mirror
   - C. Bread
   - D. Hammer
   - E. Book

2. How many months are there in a year?
   - A. 30
   - B. 12
   - C. 10
   - D. 7
   - E. 5

3. Which of these words best describes Tom Sawyer?
   - A. Mischievous
   - B. Handsome
   - C. Intellectual
   - D. Lonely
   - E. Timid

4. How many days are there in a week?
   - A. 4
   - B. 5
   - C. 6
   - D. 7
   - E. 8

8. Which of these is a food?
   - A. Fork
   - B. Hat
   - C. Table
   - D. Floor
   - E. Apple

9. A vacuum is a space containing
   - A. ozone.
   - B. helium.
   - C. carbo. monoxide.
   - D. nitrogen.
   - E. nothing.

10. Which of these methods is not normally used to join two metal parts?
    - A. Soldering
    - B. Bolting
    - C. Riveting
    - D. Nailing
    - E. Welding

13. The kind of group singing in which different people start at different times is called a
    - A. round.
    - B. quartet.
    - C. triad.
    - D. sonata.
    - E. rhapsody.

14. Which of the following conditions will not cause a moving car to stop or stall?
    - A. Broken axle
    - B. Vapor lock
    - C. Frozen piston
    - D. Brake fade
    - E. Disconnected battery ground

15. O. Henry was famous for his
    - A. songs.
    - B. novels.
    - C. plays.
    - D. short stories.
    - E. poems.

A Look at the Questions

152. Which of these is often added to the water used in cleaning windows?
   A. Milk
   B. Soda
   C. Cornstarch
   D. Vinegar
   E. Salt

153. The charge of an electron is considered to
   A. be positive.
   B. be neutral.
   C. be negative.
   D. vary randomly.
   E. alternate regularly.

154. Socrates was a famous Greek
   A. dramatist.
   B. mathematician.
   C. king.
   D. philosopher.
   E. general.

160. How many minutes are there in an hour?
   A. 7
   B. 12
   C. 24
   D. 60
   E. 100

161. The place where a river starts is called its
   A. mouth.
   B. delta.
   C. tributary.
   D. valley.
   E. source.

162. How many flats has the key of E Flat Major?
   A. 1
   B. 2
   C. 3
   D. 4
   E. 0

168. Which of these is a satellite of the earth?
   A. Mars
   B. Moon
   C. Sun
   D. North Star
   E. Halley's comet

169. In the expression 5^4, the number 4 is called
   A. a root.
   B. a square.
   C. a coefficient.
   D. a multiplier.
   E. an exponent.

170. Ordinary house current is usually about
   A. 50 volts.
   B. 60 volts.
   C. 80 volts.
   D. 115 volts.
   E. 150 volts.

A Look at the Questions

354. A palette is used to
  A. hold paints.
  B. hold a painting
  C. remove paint.
  D. dry paint.
  E. cover a painting.
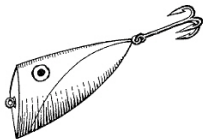
355. The above is usually called a
  A. fly.
  B. spoon.
  C. spinner.
  D. plug.
  E. streamer.

356. A "hung jury" is a jury which
  A. convicts quickly.
  B. is biased.
  C. convicts of murder.
  D. cannot agree.
  E. has been bribed.

361. In a newspaper, which of these is
most likely to be "syndicated"?
  A. An advertisement
  B. A list of advertisers
  C. A circulation list
 D. A weather forecast
  E. A column

362. Which chess piece can move only
in a diagonal direction?
  A. Bishop
  B. King
  C. Pawn
  D. Rook
  E. Queen

363. The Dewey Decimal System is
used in
  A. scientific measurement.
  B. libraries.
  C. mathematics.
  D. politics.
  E. banking.

364. The liquid portion of blood is
called the
  A. coagulant.
  B. plasma.
  C. enzyme.
  D. hemoglobin.
  E. Rh factor.

A Look at the Questions

42. In the diagram above, O is the center of the circle and AB is perpendicular to chord CD. Which of these conclusions can be drawn?

   A. AE = EO
   B. Arc AC = Arc AD
   C. ∠COD = 90°
   D. Arc AC + Arc AD = Arc BC
   E. None of these
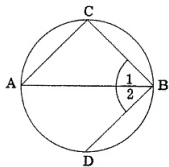
43. In the diagram above, triangle ABC is inscribed in a circle. BD ∥ AC and ∠CAB = 45°. It follows that

   A. AB is a diameter of the circle.
   B. Arc BC = 45°
   C. ∠1 = 45°
   D. BD = AC
   E. ∠CAB = ∠2

47. .0001 can be written

   A. 1.0×10^{-4}
   B. 0.1×1000
   C. 0.1×0^3
   D. $1.0 \times .001$
   E. 1.0×3^0

48. A man tosses three dimes and a penny at the same time. If all the dimes fall "heads up", what is the probability that the penny falls "tails up"?

   A. 0
   B. Greater than 0 but less than ½
   C. ½
   D. Greater than ½ but less than 1
   E. 1

49. In a triangle with angles A, B, and C, if $\sin^2 A + \sin^2 B = 1$, what conclusion can be drawn?

   A. $\sin^2 A + \sin^2 B = \cos^2 C$
   B. ∠A = ∠B
   C. ∠C = 90°
   D. $(\sin A + \sin B)^2 = 1$
   E. $\sin A + \cos A = 1$

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A Look at the Questions
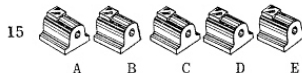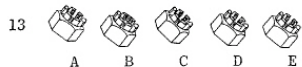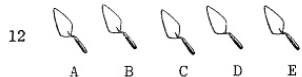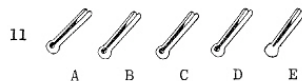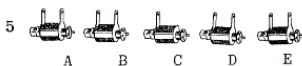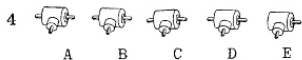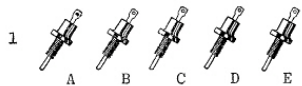
A Look at the Questions

171. If your family is renting your home or the place where you live, about how much are they paying each month?
    - A. Less than $60
    - B. $60 to $79
    - C. $80 to $99
    - D. $100 to $119
    - E. $120 or more
    - F. We have bought (or are buying) our home.

172. If your family has bought (or is buying) your home, what is its present value?
    - A. Under $6,000
    - B. $6000 to $10,000
    - C. $10,000 to $15,000
    - D. $15,000 to $22,000
    - E. More than $22,000
    - F. We are renting our home.

173. Please make the best estimate you can of your family's total income for *last year* (1959). *Include money earned by both parents or anyone else in the household who worked.*
    - A. Less than $3,000
    - B. $3,000 to $5,999
    - C. $6,000 to $8,999
    - D. $9,000 to $11,999
    - E. $12,000 or more
    - F. I can't estimate this.

A Look at the Questions

51. How old were you when you first went out on a date?
    - A. I have never had a date.
    - B. 12 or younger
    - C. 13 or 14
    - D. 15
    - E. 16
    - F. 17 or older

52. On the average, how many dates do you have in a week?
    - A. I never have dates.
    - B. About 1
    - C. About 2
    - D. About 3
    - E. About 4 or 5
    - F. About 6 or 7

53. During the school year, on what days are you usually permitted to go out in the evening for fun (until 8 P.M. or later)?
    - A. Saturdays only
    - B. Fridays and Saturdays only
    - C. Fridays, Saturdays, and Sundays only
    - D. Any day
    - E. Only for very special occasions
    - F. Never

54. How many times have you gone "steady" in the past three years?
    - A. None
    - B. Once
    - C. Twice
    - D. Three times
    - E. Four times
    - F. Five or more times

Current Status

Data   Captured from 9-track tape; all examined; some understood

Documentation   Most located, but not (yet?) student answer sheets

Participants   Estimate 15% deceased; Lexis/Nexis "located" 259K, failed on 78K

Initial linkage   to SSA Master Death File in progress

Weights   Four sets in data, none of which can be reconstructed

2/10 Meeting at NBER/Cambridge   with domain scientists

Initial proposals   submitted to NIA, including linkage to NDI+

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New Projects and People

Plans

Organizational/Governance Structure being created

High school reunions Will be present at many this spring

   Weights Plan to re-do using modern methodology

Center-scale proposal to NIA in Fall 2010, on which other
                proposals will build

Concept for the Research One full-depth, small width follow-up

- For intrinsic interest
- As basis for smaller (sample size), more
  intensive (e.g., even including biological
  samples) specialized studies (of, e.g., twins
  and veterans)

Other Funding Targets BLS, IES, VA

Project Talent II ?????

World Statistics Day

- Initiative of UN Economic and Social Council
- Simultaneous national celebrations, on **20.10.2010**, of the importance and success of "official statistics"
- Self-appointed US planning committee: Connie Citro (CNSTAT), Alan Karr (NISS), Katherine Wallman (OMB), Ron Wasserstein (ASA), coordinating with ISI
- Ideas
  - Presidential proclamation
  - Hill/media/public-directed event in DC, focusing on success stories in both private and public sectors
- Web site: http://unstats.un.org/unsd/wsd/Default.aspx
- Ideas welcome!

World Statistics Day

20.10.2010
World Statistics Day

Service · Professionalism · Integrity

Continuing Projects

DHHS Program Support Center

Hamner Centers Joint postdoc program

NCES Current thrusts include CWI, confidentiality for SLDS, FPE for NAEP, maps/graphics, research access to SLDS

NASS Joint Research Program, with 3 teams (faculty $\times 2$, postdoc, student, NASS personnel)

NCI Proteomic Technologies: Metrology, Research Methods Design and Analysis

NSF/DTRA Bayesian Methods in Syndromic Surveillance: CAR Models and Computational Implementation

TRB Establishing Monitoring Programs for Travel Time Reliability

Current Postdocs

> CPTAC *Xingdong Feng* (Statistics, Illinois at Urbana–Champaign), *Xia Wang* (Statistics, Connecticut)
>
> NASS *Michael Robbins* (Mathematical Sciences, Clemson), *Hailin Sang* (Statistics, Connecticut), *Jay (Jianqiang) Wang* (Statistics, Iowa State)
>
> Official Statistics *Saki Kinney* (Statistics, Duke)
>
> Proteomics; Hamner *Jessie Xia* (Biomedical Engineering, Duke)
>
> Syndromic Surveillance *Frank (Jian) Zou* (Statistics, Connecticut)

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Overview

Goal of the Program

To advance the NISS mission to strengthen and serve the community, by means of

Research by bringing problems to NISS' attention and creating relationships to address them

Information dissemination at workshops and technology days, and through other mechanisms

Human resource development including new researcher fellowships, project participation, . . .

Networking Award-winning *cross-sector forum* bringing together academia, industry and government

Who Are the Affiliates?

Industry AT&T Labs-Research, Avaya Labs Research, Bayer HealthCare, GlaxoSmithKline, Eli Lilly, Merck & Company, MetaMetrics, PNYLAB, RTI International, SAS Institute, SPSS/IBM, Telcordia Technologies, Yahoo! Labs

Government Bureau of Labor Statistics, Census Bureau, Energy Information Administration, National Agricultural Statistics Service, National Center for Education Statistics, National Center for Health Statistics, National Security Agency, Office of the Comptroller of the Currency

Who Are the Affiliates?

Academia California Berkeley, Carnegie Mellon, Connecticut, **Duke**, Florida, Florida State, George Mason, Georgetown, Georgia, Illinois, Indiana, Iowa State, Johns Hopkins, Medical University of South Carolina, **Michigan**, Missouri–Columbia, **North Carolina State**, **North Carolina at Chapel Hill**, Oakland, Ohio State, Penn State, Purdue, Rice, Rutgers, South Carolina, Southern Methodist, Stanford, Texas A&M, Virginia Commonwealth

Board of Trustees Affiliates Committee

Members   Bob Bell (AT&T), John Eltinge (BLS), Michael
Kosorok (UNC BIOS), Jim Landwehr (Avaya),
Keith Soper (Merck), Cliff Spiegelman (TAMU),
Roy Whitmore (RTI International), *Lee Wilkinson*
(Systat) + Karr, Nunnelly, Sedransk

Activities   Bi-monthly teleconferences, reports to ExecComm
and full BoT

Current emphases   Affiliates' clusters, 10th anniversary

Events Since April 2009

6/1–2/09	NASS Project Kickoff (RTP)
6/14–17/09	ITSEW 2009: The Concept of Total Survey Error—Uses and Abuses (Tällberg, Sweden)
8/1/09	JSM Affiliates Meeting (DC)
8/3/09	NISS/SAMSI JSM Reception (DC)
10/20-21/09	Financial Risk Modeling Workshop II (DC)
11/4–5/09	Computational Advertising Workshop (RTP)

Upcoming Events

6/13–16/10   ITSEW 2010: The Ongoing Evolution of Survey
                    Methodology and the Impact on Total Survey Error
                    (Stowe)
6/27–28/10   Workshop on Syndromic Surveillance (RTP)
     7/31/10   JSM Affiliates Meeting (Vancouver)
       8/2/10   NISS/SAMSI JSM Reception (Vancouver)
   Fall 2010   Workshop on Comparative Effectiveness
                    Research (location and dates TBA)
         4/11   Affiliates Annual Meeting (HOST NEEDED!!!)

Co-Sponsored Events

6/6–9/10	SRCOS 2010 (Virginia Beach)
6/16–19/10	Interface 2010: Computational Statistics and Human Behavior (Seattle)
7/5–9/10	ISBIS–2010 (Portoroz, Slovenia)
4/21–24/11	International Indian Statistical Association Annual Conference (Raleigh)

Review of Benefits

Every NISS-affiliate relationship is customized, but all feature

Access directly to NISS and SAMSI leadership

Research Input to NISS research agenda, opportunity to form collaborations, early access to results

Interaction with postdocs, who are superb potential employees

Networking with other affiliates

ARA $2,500 per year into roll-over account that may be used to meet expenses of any NISS, co-sponsored or SAMSI event

Annual meeting expenses covered by NISS

Preferential treatment Event fees of up to $1000 paid by others waived; preference for space-limited events, new researcher fellowships (added $), Sacks Award

Services

Software Free access to NISS-produced and other software

AJLS Publicly available job listing service on which only affiliates can post

Event co-sponsorship, which makes events ARA-eligible

Web links to affiliates' sites

Featured affiliate on the web site and in each issue of *NISS Parameters*

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Affiliates and NISS Initiatives

Affiliates Initiatives

Improved communication Jamie

Remote access to events at NISS, via web streaming

Clusters for those with shared interests

10th anniversary of the program, in 2010

NISS

Celebrating 20th year of NISS

20 | 10

10th year of affiliates program

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Affiliates Clusters

What are Clusters?

Concept Group of *individuals from affiliates* with shared interests pursuing activities of value to them

Multiple structures Sector, problem area, statistical theme, SAMSI program, . . .

Time-varying foci representing interests of members

Goals

- Sharpen the value delivered by NISS to the affiliates
- Provide structured ways in which multiple individuals from affiliates can engage with NISS and each other
- Reinforce NISS' and affiliates program's cross-sector role
- Focus recruiting of new affiliates

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Affiliates Clusters

Possible Cluster Activities

- Strengthening networking component of the affiliates program
- Assessing new opportunities for statistics (e.g., leading to Exploration Workshops)
- Closing the gap between initiating activities and proposals/research
- Continuing research discussions and collaborations (model: SAMSI working groups)
- Discussion of issues for which there is no other forum (e.g., federal statistical agencies' pipeline problem)
- Serving as prelude to/continuation of SAMSI programs

Affiliates Clusters: The Past

- Proposed in 2009
- Discussed at 4/09 AAM in Storrs
- Initial meetings at 8/09 JSM Affiliates Meeting of clusters on
  - Networks
  - Surveys
- Survey Day on 4/22/10
- Not much else

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Affiliates Clusters

Affiliates Clusters: The Future

- Re-energize network cluster
- Activate planned other clusters
    - Computation and software
    - Pharma
- Link clusters to SAMSI programming

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Generalities

Challenges Facing NISS

- Continued but controlled growth
- Making the DC presence work, especially for affiliates
- Associate director search
- SAMSI renewal proposal
- Building addition re-financing (2012)
- Other implications of economic situation
- Support from foundations

Background

Done by Art & Science Group (Baltimore/Carrboro)

- 2007 Strategic Positioning Study recommended that NISS "consider seeking philanthropic and other forms of financial support"
- Case statement (V2) emphasized "big problem" capability for NISS
- 16 telephone interviews in two rounds (3 people in both), lasting from 20 minutes to 1 hour+

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Development Feasibility Study

High-Level Conclusions

Interviewees think

- Case statement objectives are compelling
- NISS has not demonstrated that it can attain these objectives, and key relationships are not in place
- NISS should seek foundation support for specific projects, in part in order to demonstrate the ability to deliver on the promise of the case
- Philanthropic fund raising by NISS requires a three-part coalition: NC base, national funders, and the statistics community
- Executive and Board leadership of NISS should commit to the case statement and demonstrating NISS' capability to raise funds from foundations