

Information design analysis on Iris Bell's speech

1.00.27	Slideshow begins – simplest format possible	Helps focus on data – Affective level not well served
1.00.30	Possible implicature	“in my brief time” might mean “I could extend my speech if I had more time available, thus being more persuasive”
1.00.38	Structure of lecture	Cognitive level; helps audience understand the rest of the lecture and organise the furnished information
1.00.40	Accentuation-emphasis on “are” ... “there ARE biological effects” This is used in the whole speech and many times so it will not be mentioned again, unless it is important (i.e. “MULTIPLE observation studies in Thousands of patients” at 1.00.46 and “offer MIXED findings” at 1.01.06” etc	Sounds engaging and confident, draws attention to opinions/facts/ data that she wants to emphasize.
1.01.36	Word selection “the very famous controversy of Benveniste” instead of just saying the Bienveniste experiment	Sense of controversy/fame attracts attention
1.01.44	Call to authority and acceptance of what was once rejected “european scientists who were <i>originally sceptics</i> and in a multicenter study across europe involving 4 different laboratories...used a more sophisticated, more objective form of measurement...”	Explains how the <i>frail</i> experiment of Benveniste was repeated by sceptics in MORE labs with BETTER methods that made them change their mind. The audience should change their mind as well!
1.02.36	(Anorthodox) Sequential positioning	Refers to what the very first speaker (member of the opposite “army”) has said...
1.02.46	Showing disagreement	...and rejects it. Again there is the implicature that “the first speaker does not know his facts, thus he is not

		credible or trustworthy".
1.02.55	Call to Authority "a well recognised area in toxicology"	Serves the previous expressed disagreement
1.03.06	Emphasis and Adjacency pairs "hormesis-even ASPIRIN prepared this way can have this effect	Explains the previously mentioned paradoxical effect of aspirin dilution. The presentation of a PARADOX attracts attention and prepares the audience to accept strange at first sight facts.
1.03.09	Call to authority with the use of slideshow (visualisation)	Multiple papers are simultaneously presented, demonstrating the "overwhelming" data
1.03.09-1.04.10	Review	A review of what has been done in scientific studies with animals (where no placebo effect can be taken into account) is shortly presented (as a broad spectrum mass of evidence) to convince the listeners
1.04.05	(contradicting) Shared sense	All this data has been chosen to be <i>simply ignored</i> by those opposing homeopathy, which strikes as something against scientific "shared sense" of evaluating all possible data
1.04.20-1.05.28	Description-Narrative (call to authority @ 1.04.45)	Description of experiment and possible alternative evaluation of results that serve the goal of the speaker and end with an impressive <i>constative statement</i> "is biologically active , but not clinically effective"
1.05.29-1.06.24	Narrative	Speaker explains what they did in <i>her own</i> laboratory, attracts attention and prepares the audience to accept the findings
1.06.24-1.06.40	Visualisation of what she was describing and presentation of results	The results are presented in an easily understood manner and seem conclusive and impressive
1.06.41-1.07.16	Call to authority	
1.07.16	Sequential positioning and acceptance	Bonds the different speeches, allows to proceed

		to next topic
1.07.20	Sequential focus	First the question, then the answer. Helps understand the change of topic and the structure of the presentation
1.08.12-1.08.29	Call to authority (NEJM)	enhances the effect of the previous said on observational studies (which sceptics usually reject-but NEJM accepts!)
1.08.30-1.09.20	Call to authority	Different studies are presented to demonstrate that the speaker has a strong point. NOTE: every reference to a certain study is a call to authority, therefore from now on this will not be mentioned in the discourse analysis (as far as data from studies are concerned)
1.09.21	Sequential focus	Question-answer. Change of topic-structure revealed
1.09.26	Word selection "one of the more famous" "vigorously attacked"	Attracts attention, makes the audience wonder "why?"
1.09.57	Word selection- implicature "study declared that homeopathy should be thrown out of existence"	Extreme thesis that insinuates that the study was not objective
1.10.00	Call to Authority "this particular analysis has been HEAVILY criticised by EXPERTS IN META-ANALYSIS"	Uses the expert opinion to express and justify disagreement with this particular study that ends up being considered falsified (wrong methodology, selective data, data hidden)
1.10.10-1.11.00	Body language	The speaker uses strong (in comparison with previous calm gestures) body language that support her strong opposition to this certain study
1.11.42	Sequential organisation (external validity issues)	Addressing the issues that were presented in introduction (structure of speech is maintained)
1.12.18	Sequential positioning	After call to authority, the speaker goes back to the study she disagreed with in order to further reduce its validity

1.12.28	General statements on homeopathic approach (both constative and performative)	Pattern recognition is included in homeopathic approach, don't take into account this study that ignores this main principle
1.12.36	Error in slideshow, text is hidden	Disappointing!
1.12.40-1.13.32	Adjacent pairs	Classsical approach-homeopathic approach (systemic approach) which is again used as an argument that contradicts Dr Novella's expressed opinions
1.14.09	Sequential positioning-listing	Proposition on outcomes that should be studied, this comes as an epilogue to the previously analysed contradiction of conventional and homeopathic approach (the talk is oriented to the talk that preceeded it and shifts the gravity center to where the speaker wants)
1.14.42-1.16.04	Narrative and body language (1.15.27-1.15.54)	The speaker ,after mentioning what is important for her (see previous point) is using once more her body language along with the description of what happened during this last experiment. Result: The audience understands that something important is being said and is more open to the "alternative" methodology used for this last study and understands why the simple RCTs are not sufficient to "reveal" the efficacy of homeopathic treatments.
1.17.00	Repetition of theme "non-linear dynamic system"	This is important for the explanation of results found in many homeopathic studies , results that are not evaluated correctly by conventional medicine. The audience is more likely to understand this model

		through repetition in different experiments/occasions
1.17.27	Conclusion: structure of speech repeated	Important for Cognitive level (understanding of data)
EXTRA COMMENTS: Response to question1	Question tries to lure Dr Bell into saying that all the others (including Lancet editors) are biased, which would make her look biased as well	She avoids this pit, by pointing out that RCTs studies are designed for classical pharmaceutical agents and this does not apply to homeopathy (this information had not been mentioned before, so she adds something new to the discussion and doesn't look as if she is just avoiding answering.
Response to question 2	"parallel worlds"	Dr Bells accepts the current standards but points out that they need to be enriched with methodologies closer to the philosophy of homeopathy (acceptance and enrichment is the way to go!)

In conclusion I would say that the speaker is using a variety of techniques in order to achieve her goals. One of her strongest weapons is the extended literature that she uses including different kinds of studies/experiments and published articles in well respected medical journals. All these are tightly put on a frame/structure that she has presented right from the beginning and to which she remains faithful, allowing the listener to follow her easily. She doesn't lose the opportunity to connect her speech with the ones that have preceded it, either by joining forces or by clashing heads, always supporting her opinion with the appropriate bibliography and train of thought. The poor aesthetically presented slideshow and the sometimes monotone voice/body language might seem boring to some, but I consider them appropriate for an academic speech. And beneath this calm presentation, we can always distinguish the sparks (and implicatures) when they appear.

INFORMATION ON SPEAKER (data collected from her personal site and biomedexperts.com):

Iris Bell, MD, PhD, is a psychiatrist, university professor, and has been a researcher in areas related to complementary and alternative medicine for 30 years. She was chosen as one of the Best Doctors in the Pacific region of the US in 1996 and in the US in 1998.

Dr. Bell has served on the faculties at Harvard Medical School, University of California San Francisco, and the University of Arizona. She graduated magna cum laude in biology from Harvard University and then received her PhD in Neuro- and Biobehavioral Sciences and MD from Stanford University. Her psychiatry internship and residency were at the University of California–San Francisco, and she is Board certified in Psychiatry with Added Qualification in Geriatric Psychiatry. She is licensed to practice conventional medicine in Arizona and California. She is also nationally certified in biofeedback, a fellow of the American College of Nutrition, and a licensed physician in homeopathy/alternative medicine in Arizona.

She has published scores of papers and book chapters on her clinical research in addition to a monograph on environmental illness.

The following list includes the papers published by Dr. Bell in chronological order:

1. **2010:** Menk Otto Laurie; Howerter Amy; Bell Iris R; Jackson Nicholas
Exploring measures of whole person wellness: integrative well-being and psychological flourishing.
Explore (New York, N.Y.) 2010;6(6):364-70.
Department of Family and Community Medicine, The University of Arizona, Tucson, AZ.
2. **2010:** Brooks Audrey J; Bell Iris R; Howerter Amy; Jackson Nicholas; Aickin Mikel
Effects of homeopathic medicines on mood of adults with histories of coffee-related insomnia.
Forschende Komplementärmedizin (2006) 2010;17(5):250-7.
Department of Psychology, the University of Arizona, Tucson, AZ 85721, USA.
brooksaj@email.arizona.edu
3. **2008:** Novella Steven; Roy Rustum; Marcus Donald; Bell Iris R; Davidovitch Nadav; Saine Andre
A debate: homeopathy--quackery or a key to the future of medicine?
Journal of alternative and complementary medicine (New York, N.Y.) 2008;14(1):9-15.
Yale University, New Haven, CT, USA.
4. **2007:** Koithan Mary; Verhoef Marja; Bell Iris R; White Margaret; Mulkins Andrea; Ritenbaugh Cheryl
The process of whole person healing: "unstuckness" and beyond.
Journal of alternative and complementary medicine (New York, N.Y.) 2007;13(6):659-68.
Department of Medicine (Program in Integrative Medicine), The University of Arizona, Arizona Health Sciences Center, Tucson, AZ, USA.
mkoithan@nursing.arizona.edu
5. **2007:** Bell Iris R
Adjunctive care with nutritional, herbal, and homeopathic complementary and alternative medicine modalities in stroke treatment and rehabilitation.

Topics in stroke rehabilitation 2007;14(4):30-9.

Department of Family and Community Medicine, The University of Arizona College of Medicine, Tucson, Arizona, USA.

6. **2007:** Rao Manju Lata; Roy Rustum; Bell Iris R; Hoover Richard
The defining role of structure (including epitaxy) in the plausibility of homeopathy.
Homeopathy : the journal of the Faculty of Homeopathy 2007;96(3):175-82.
The Materials Research Institute, The Pennsylvania State University, University Park, PA 16802, USA. mur21@psu.edu
7. **2007:** Koithan Mary; Bell Iris R; Caspi Opher; Ferro Lynn; Brown Victoria
Patients' experiences and perceptions of a consultative model integrative medicine clinic: a qualitative study.
Integrative cancer therapies 2007;6(2):174-84.
Department of Medicine (Program in Integrative Medicine) at The University of Arizona Health Sciences Center, Tucson, AZ 85724-5153, USA.
mkoithan@nursing.arizona.edu
8. **2007:** Baldwin Ann L; Bell Iris R
Effect of noise on microvascular integrity in laboratory rats.
Journal of the American Association for Laboratory Animal Science : JAALAS 2007;46(1):58-65.
Department of Physiology, University of Arizona, Tucson, AZ, USA.
abaldwin@u.arizona.edu
9. **2007:** Baldwin Carol M; Bell Iris R; Giuliano Anna; Mays Mary Z; Arambula Pete; Alexandrov Andrei
Differences in Mexican American and Non-Hispanic White veterans' homocysteine levels.
Journal of nursing scholarship : an official publication of Sigma Theta Tau International Honor Society of Nursing / Sigma Theta Tau 2007;39(3):235-42.
Arizona State University College of Nursing & Healthcare Innovation, Southwest Borderlands, AZ 85004-0698, USA. carol.baldwin@asu.edu
10. **2006:** Bell Iris R; Koithan Mary
Models for the study of whole systems.
Integrative cancer therapies 2006;5(4):293-307.
Department of Family, Program in Integrative Medicine, University of Arizona College of Medicine, Tucson, AZ 85719, USA. ibell@u.arizona.edu
11. **2006:** Elder Charles; Aickin Mikel; Bell Iris R; Fønnebø Vinjar; Lewith George T; Ritenbaugh Cheryl; Verhoef Marja
Methodological challenges in whole systems research.
Journal of alternative and complementary medicine (New York, N.Y.) 2006;12(9):843-50.
Kaiser Permanente Center for Health Research, Portland, OR, USA.

12. **2005:** Bell Iris R; Brooks Audrey J; Baldwin Carol M; Fernandez Mercedes; Figueredo Aurelio J; Witten Mark L
JP-8 jet fuel exposure and divided attention test performance in 1991 Gulf War veterans.
Aviation, space, and environmental medicine 2005;76(12):1136-44.
Research Service, Southern Arizona VA Health Care System, USA.
ibell@u.arizona.edu
13. **2005:** Bell Iris R
All evidence is equal, but some evidence is more equal than others: can logic prevail over emotion in the homeopathy debate?
Journal of alternative and complementary medicine (New York, N.Y.) 2005;11(5):763-9.
14. **2005:** Baldwin Carol M; Bell Iris R; Guerra Stefano; Quan Stuart F
Obstructive sleep apnea and ischemic heart disease in southwestern US veterans: implications for clinical practice.
Sleep & breathing = Schlaf & Atmung 2005;9(3):111-8.
College of Nursing, Arizona State University, Southwest Borderlands Initiative, Tempe, AZ, 85287-2602, USA. carol.baldwin@asu.edu
15. **2005:** Bell Iris R
Diet and nutrition in Alzheimer's disease and other dementias of late life.
Explore (New York, N.Y.) 2005;1(4):299-301.
Program in Integrative Medicine, The University of Arizona College of Medicine, Tucson, AZ, USA.
16. **2005:** Bell Iris R
Depression research in homeopathy: hopeless or hopeful?
Homeopathy : the journal of the Faculty of Homeopathy 2005;94(3):141-4.
17. **2004:** Bell Iris R; Lewis Daniel A; Lewis Sabrina E; Schwartz Gary E; Brooks Audrey J; Scott Anne; Baldwin Carol M
EEG alpha sensitization in individualized homeopathic treatment of fibromyalgia.
The International journal of neuroscience 2004;114(9):1195-220.
Program in Integrative Medicine, Department of Psychiatry, The Mel and Enid Zuckerman Arizona College of Public Health, University of Arizona, Tucson, Arizona, USA. ibell@u.arizona.edu
18. **2004:** Caspi Opher; Bell Iris R
One size does not fit all: aptitude chi treatment interaction (ATI) as a conceptual framework for complementary and alternative medicine outcome research. Part II--research designs and their applications.
Journal of alternative and complementary medicine (New York, N.Y.) 2004;10(4):698-705.
Program in Integrative Medicine, University of Arizona, Tucson, AZ, USA.
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One size does not fit all: aptitude x treatment interaction (ATI) as a conceptual framework for complementary and alternative medicine outcome research. Part 1-what is ATI research?
Journal of alternative and complementary medicine (New York, N.Y.) 2004;10(3):580-6.
Program in Integrative Medicine, University of Arizona, Tucson, AZ 85724-5153, USA.
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20. **2004:** Bell I R; Lewis D A; Brooks A J; Schwartz G E; Lewis S E; Walsh B T; Baldwin C M
Improved clinical status in fibromyalgia patients treated with individualized homeopathic remedies versus placebo.
Rheumatology (Oxford, England) 2004;43(5):577-82.
Department of Psychiatry, Mel and Enid Zuckerman Arizona College of Public Health at the University of Arizona, Tucson, USA. IBELL@U.ARIZONA.EDU
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Electroencephalographic cordance patterns distinguish exceptional clinical responders with fibromyalgia to individualized homeopathic medicines.
Journal of alternative and complementary medicine (New York, N.Y.) 2004;10(2):285-99.
Department of Medicine, University of Arizona, Tucson, AZ, USA.
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22. **2004:** Bell Iris R; Lewis Daniel A; Brooks Audrey J; Schwartz Gary E; Lewis Sabrina E; Caspi Opher; Cunningham Victoria; Baldwin Carol M
Individual differences in response to randomly assigned active individualized homeopathic and placebo treatment in fibromyalgia: implications of a double-blinded optional crossover design.
Journal of alternative and complementary medicine (New York, N.Y.) 2004;10(2):269-83.
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Complementary and conventional medicine: a concept map.
BMC complementary and alternative medicine 2004;4():2.
Southern Arizona VA Health Care System, Research Service Line, Tucson, AZ, USA.
carolb@resp-sci.arizona.edu
24. **2004:** Schwartz Gary E; Swanick Summer; Sibert Willow; Lewis Daniel A; Lewis Sabrina E; Nelson Lonnie; Jain Shamani; Mallory Laurel; Foust Linda; Moore Kay; Tussing Deborah; Bell Iris R
Biofield detection: role of bioenergy awareness training and individual differences in absorption.
Journal of alternative and complementary medicine (New York,

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Center for Frontier Medicine in Biofield Science and Department of Medicine,
University of Arizona, Tucson, 85719, USA. GSCHWART@U.ARIZONA.EDU
25. **2004:** Bell Iris R; Lewis Daniel A; Lewis Sabrina E; Brooks Audrey J; Schwartz Gary E;
Baldwin Carol M
**Strength of vital force in classical homeopathy: bio-psycho-social-spiritual
correlates within a complex systems context.**
Journal of alternative and complementary medicine (New York,
N.Y.) 2004;10(1):123-31.
Department of Medicine and Program in Integrative Medicine, University of Arizona,
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**Development and validation of a new global well-being outcomes rating scale for
integrative medicine research.**
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**Associations between chemical odor intolerance and sleep disturbances in
community-living adults.**
Sleep medicine 2004;5(1):53-9.
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Fostering a healing presence and investigating its mediators.
Journal of alternative and complementary medicine (New York, N.Y.) 2004;10 Suppl
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mcdosh@dakota.com.net
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**On the definition of complementary, alternative, and integrative medicine:
societal mega-stereotypes vs. the patients' perspectives.**
Alternative therapies in health and medicine 2003;9(6):58-62.
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**Development and validation of IMAQ: Integrative Medicine Attitude
Questionnaire.**
BMC medical education 2003;3():5.
Department of Family Practice, Maine Medical Center, 22 Bramhall St, Portland, ME
04102-3175, USA. schnec@mmc.org

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Homeopathic practitioner views of changes in patients undergoing constitutional treatment for chronic disease.
Journal of alternative and complementary medicine (New York, N.Y.) 2003;9(1):39-50.
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Gas discharge visualization evaluation of ultramolecular doses of homeopathic medicines under blinded, controlled conditions.
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Integrative medical education: development and implementation of a comprehensive curriculum at the University of Arizona.
Academic medicine : journal of the Association of American Medical Colleges 2002;77(9):851-60.
Program in Integrative Medicine and Department of Medicine, University of Arizona College of Medicine, Tucson, 85724-5153, USA. vmaizes@ahsc.arizona.edu
34. **2002:** Baldwin Carol M; Long Kathi; Kroesen Kendall; Brooks Audrey J; Bell Iris R
A profile of military veterans in the southwestern United States who use complementary and alternative medicine: implications for integrated care.
Archives of internal medicine 2002;162(15):1697-704.
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carolb@resp-sci.arizona.edu
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Translating a nonlinear systems theory model for homeopathy into empirical tests.
Alternative therapies in health and medicine 2002;8(3):58-66.
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Homeopathic constitutional type questionnaire correlates of conventional psychological and physical health scales: individual difference characteristics of young adults.
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US military veterans' perceptions of the conventional medical care system and their use of complementary and alternative medicine.

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38. **2002:** Bell Iris R; Caspi Opher; Schwartz Gary E R; Grant Kathryn L; Gaudet Tracy W; Rychener David; Maizes Victoria; Weil Andrew
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Program in Integrative Medicine, The University of Arizona Health Sciences Center, 1501 N Campbell Ave, Tucson, AZ 85724, USA. ibell@u.arizona.edu
39. **2001:** Bell I R; Baldwin C M; Stoltz E; Walsh B T; Schwartz G E
EEG beta 1 oscillation and sucrose sensitization in fibromyalgia with chemical intolerance.
The International journal of neuroscience 2001;108(1-2):31-42.
Department of Psychiatry, The University of Arizona College of Medicine, 1501 N. Campbell Avenue, Tucson, AZ 84724, USA. ibell@u.arizona.edu
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Sensitization studies in chemically intolerant individuals: implications for individual difference research.
Annals of the New York Academy of Sciences 2001;933():38-47.
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41. **2000:** Caspi O; Bell I R; Rychener D; Gaudet T W; Weil A T
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Plausibility of homeopathy and conventional chemical therapy: the systemic memory resonance hypothesis.
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GSCHWAR@u.arizona.edu
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Subjective ratings of odorants by women with chemical sensitivity.
Toxicology and industrial health 1999;15(6):577-81.
Department of Psychology, University of Arizona, Tucson, USA.
mefernan@u.arizona.edu

44. **1999:** Taren D L; Tobar M; Hill A; Howell W; Shisslak C; Bell I; Ritenbaugh C
The association of energy intake bias with psychological scores of women.
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85719, USA. taren@u.arizona.edu
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Odor sensitivity and respiratory complaint profiles in a community-based sample with asthma, hay fever, and chemical odor intolerance.
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Respiratory Sciences Center, University of Arizona, Tucson, USA. carolb@resp-sci.arizona.edu
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EEG sensitization during chemical exposure in women with and without chemical sensitivity of unknown etiology.
Toxicology and industrial health 1999;15(3-4):305-12.
Department of Psychology, University of Arizona Health Sciences Center, Tucson, USA.
47. **1999:** Bell I R; Baldwin C M; Fernandez M; Schwartz G E
Neural sensitization model for multiple chemical sensitivity: overview of theory and empirical evidence.
Toxicology and industrial health 1999;15(3-4):295-304.
Department of Psychiatry, University of Arizona, Tucson 85723, USA.
ibell@u.arizona.edu
48. **1999:** Bell I R; Szarek M J; Dicenso D R; Baldwin C M; Schwartz G E; Bootzin R R
Patterns of waking EEG spectral power in chemically intolerant individuals during repeated chemical exposures.
The International journal of neuroscience 1999;97(1-2):41-59.
Department of Psychology, The University of Arizona, Tucson 85721, USA.
IBELL@U.ARIZONA.EDU
49. **1998:** Bell I R; Baldwin C M; Russek L G; Schwartz G E; Hardin E E
Early life stress, negative paternal relationships, and chemical intolerance in middle-aged women: support for a neural sensitization model.
Journal of women's health / the official publication of the Society for the Advancement of Women's Health Research 1998;7(9):1135-47.
Department of Psychiatry, University of Arizona, Tucson, USA.
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Repressive and defensive coping styles predict resting plasma endorphin levels in the elderly.
Biological psychology 1998;49(3):295-302.
Eastern Washington University, Department of Psychology, Cheney 99004-2431, USA. jkline@ewu.edu

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Self-reported chemical sensitivity and wartime chemical exposures in Gulf War veterans with and without decreased global health ratings.
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Department of Psychiatry, University of Arizona Health Sciences Center, Tucson.
ibell@u.arizona.edu
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Illness from low levels of environmental chemicals: relevance to chronic fatigue syndrome and fibromyalgia.
The American journal of medicine 1998;105(3A):74S-82S.
Department of Psychiatry, University of Arizona, Tucson Veterans Affairs Medical Center, 85723, USA.
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Archives of environmental health 1998;53(5):347-53.
Respiratory Sciences Center, Department of Medicine, University of Arizona, Tucson, USA.
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Department of Psychiatry, University of Arizona Health Sciences Center, Tucson, USA.
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Quantitative EEG patterns during nose versus mouth inhalation of filtered room air in young adults with and without self-reported chemical odor intolerances.
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Department of Psychiatry, University of Arizona Health Sciences Center, Tucson 85724, USA. ibell@u.arizona.edu
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Department of Psychiatry, Psychology, Family and Community Medicine, University of Arizona Health Sciences Center, and the Department of Psychiatry, Tucson Veterans Affairs Medical Center, Tucson, Ariz., USA.
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The association of respiratory problems in a community sample with self-reported

chemical intolerance.

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Testing the neural sensitization and kindling hypothesis for illness from low levels of environmental chemicals.

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On a lighter note, she wrote the funny, touching, and inspirational **Chew on Things – It Helps You Think: Words of Wisdom from a Worried Canine** to celebrate her beloved soft-coated wheaten terrier Casey's life. As Dr Bell says in her personal internet site (www.irisbell.com) throughout his life, Casey himself benefited from both Western and alternative medical help in surviving a series of health crises, from eating poison mushrooms in the backyard that sprang up overnight during his puppy time, to curing autoimmune hemolytic anemia in his old age. Her passion, she goes on in her site, is to teach people who find themselves with a chronic illness and are at the start of their own difficult journey home to themselves and to better health — a learning experience for us all. She teaches, writes, and lives in Tucson, Arizona with her three dogs – Rosie, Harry, and Charlie.