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If you have a baccalaureate degree or higher, you have served as an Associate of the APA for 24 months, you have completed a minimum of 200 polygraph examinations, you have attended at least one APA Annual Seminar, and have completed 60 hours of CEH in polygraph, request that your membership classification be upgraded from ASSOCIATE to MEMBER. In order for the Board of Directors to act upon your request, it will be necessary for you to:

Provide a copy of your transcripts, a notarized statement from your supervisor or knowledgeable colleague, who must be a Member of the American Polygraph Association (APA), attesting that you have completed a minimum of 200 polygraph examinations, and proof of your 60 hours of continuing education in the field of polygraph within the last 36 months.

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Recently, Oksana Stevenson of Axciton arranged for several different continuing education trainings in Kiev, Ukraine.

The most recent training was held at the Ukrainian National Police Academy in November, 2018. We will share some pictures from that training in the magazine. Several examiners sent us the following description of the National Police Academy and its history. It is a truly amazing structure, replete with amenities such as an exceptional dining facility, large beautiful auditoriums and classrooms, and a law enforcement museum that is incredible, complete with their own docents.

Ukraine remains committed to increasing the knowledge base and professionalism of their national polygraph program. Through the monumental efforts of Oksana along with the “Ukrainian Polygraph Collegium” and “Ukrainian association of law enforcement Poligraphists” they have held several trainings with instructors from APA accredited schools. Oksana Stevenson and the “Ukrainian Polygraph Collegium “including Vitalii Shapovalov, Olesia Goncharova, Diana Alieksieieva-Protsiuk . and “Ukrainian association of law enforcement Poligraphists” including Rehina Yaremchuk and Taras Sololovskii have coordinated to ensure the training is what the students/examiners would get if they were able to travel to the United States. All of the training has been approved for APA training hours via the continuing education committee. Oksana has also helped Ukrainian polygraph examiners have their written works published in APA publications. She continues to work in a steadfast manner to raise the polygraph bar for the Ukrainian examiners.

From the Ukrainian examiners:

**The Ukraine National Police Academy**

The National Academy of Internal Affairs is the leading institution of higher education for law enforcement. It is under the management of the Ministry of Internal Affairs of Ukraine and is specifically tasked with law enforcement training.

The history of the of the Academy is long and colorful, beginning with on June 11, 1921. That year the local courses for police officers began in Kharkiv which is considered the birth of the National Academy of Internal Affairs.
One year later, the School of Senior Command Personnel for the Workers’ and Peasants’ Police of the Ukrainian Soviet Socialists Republic was created, based on the course work from the early academy days. In 1925, the academy relocated from Kharkov to Kiev.

After the proclamation of Ukraine’s independence in 1991, the educational institution was renamed as: Kyiv High School of the Ministry of Internal Affairs of Ukraine. Ukrainian Academy of Internal Affairs was created on its basis later in 1992.

In December 1996, it was granted the status of the National Institute by the Decree of the President of Ukraine. Nowadays it is known as the National Academy of Internal Affairs of Ukraine (hereinafter - the Ministry of Internal Affairs).

Academy Directors of the Ministry of Internal Affairs:

Director – Cherniei Volodymyr Vasylovych, second rank police general, Doctor of Law, Professor.

First Vice-Director – Husariev Stanislav Dmytrovych, police colonel, Doctor of Law, Professor, Honored Lawyer of Ukraine.

Vice-Director (controls scientific activity) – Cherniavskyi Serhii Serhiiovych – Doctor of Law, Professor, Honored Science and Technology Worker of Ukraine.

Educational process:

The education process of education at the Academy may be based on full-time, part-
time and distance education and includes:

- Offering different degrees, such as: Doctor of Philosophy (PhD) and Doctor of Sciences in three scientific specialties.

- Offering degrees of higher education such as: bachelor and master’s degree in specialties «Law», «Law-Enforcement Activity», «Psychology» and «Public management and administration».

- Offering professional development (especially additional specialization) of employees of the Ministry of Internal Affairs of Ukraine, the National Police of Ukraine, the Expert Service of the Ministry of Internal Affairs of Ukraine, other law enforcement agencies, civil servants concentrated on prevention and counteraction to corruption, scientific, pedagogical and management staff of 4 departmental institutions of higher education.

- Training of UN civilian police and commanders of peacekeeping units to participate in United Nations peacekeeping missions;

- Primary training of police officers;

- Training of reserve officers.

- Training of specialists in provision of pre-medical assistance.

- Complete secondary education with in-depth legal and enhanced physical training for lyceum students.

The academy has 4969 full-based students (3811 of them – by public order) at any given time.

The academy provides the primary vocational training for the new police officers, which is taken on the basis of the academy by the order of the Ministry of Internal Affairs of Ukraine. Last year it was successfully passed by 1266 police officers.

Qualitative staffing of National Academy of Internal Affairs:
The academy employs more than 2,500 employees, including 638 scientists and trainers. The fulfillments of educational tasks are provided by a scientific team consisting of 29 departments and 5 scientific laboratories. Scientific staff includes 54 Doctors of Sciences (including seven academicians and members-correspondents of NAS of Ukraine). 43 of them have state honorary titles. There are also 237 PhDs and associate professors.

Scientific and educational branches:

Currently, the structure of the Academy includes: doctoral and post-graduate courses, four educational-scientific institutes, Institute of Post-Graduate Education, Criminal And Penal Service Institute, Subcarpathian Faculty, Law Lyceum, Special Peacekeeping Center of the Ministry of Internal Affairs of Ukraine, Department of Military Training, Department of Pre-medical Training, centers of primary vocational training, and 12 regional departments of correspondence training.

There are five specialized scientific councils, grounded for the defense of doctoral and candidate’s theses. Five scientific journals are issued on the basis of the National Academy of Internal Affairs. Authoritative scientific fields have been formed and successfully developed.

There is also a large developing program in the Institute of Postgraduate Education. There are more than 30 (thirty) categories of employees which retraining on its ba-
sis, including two groups of polygraph examiners with a total of 28 people.
Polygraph-specialization branch:

Recently, a polygraph center (hereinafter referred to as the Center) was created in the National Academy of Internal Affairs dedicated to the development and usage of innovative technologies. Now it is part of a newly created training laboratory of Psychological Support of the Educational Process’ Problems.

The laboratory’s assistant is Motliakh O.I. – Doctor of Law, Professor, and Honored Lawyer of Ukraine. He is also author of the first (in the Commonwealth of Independent States) doctoral thesis on: «Instrumental diagnostics of verbal information reliability and its usage in criminal proceedings», which was successfully defended in the National Academy of Internal Affairs in 2014. This thesis based on the complex usage of polygraphs in criminal proceedings.

The same year, four Academy’s employees passed a training course at the training laboratory of Psychological Support of the Educational Process’ Problems under the program: «Applying of polygraphs for the personnel’s investigation» (196 hours). After the course they received certificates for the right to engage in activities which inquires usage of the polygraphs.

Later, in 2017, they passed the advanced training course under the program: «The most effective standardized techniques for polygraph testing» which meets the basic standards of E2000 -02 «Standard Guide for Minimum Basic Education and Training of Individuals Involved in the Detection of Deception (PDD)».

At the moment, the Academy is paying a lot of attention to the development of the Center. In particular:

technical support:

- Two polygraphs: four-channeled AXCITON was donated by Axciton Systems Inc and six-channeled AXCITON was purchased (USA).
- Two polygraph-examining rooms are set up in accordance with the generally established requirements for such kind of activity.
- According to the modern requirements of the technique, an educationally-practical auditorium for conducting classes for polygraph examiners is furnished organizational and practical:
  - Two specialized training courses for poly-graph examiners (who work professionally in the ranks of the National Police of Ukraine) are organized and conducted on the basis of the Academy.
  - A number of scientific forums, seminars, round tables, conferences (international ones among them), related to the application of the newest directions of psychophysiological research, have been held.
  - These are:

**Legislative provision:**

Taking into account the fact, that legal usage of a polygraph in Ukraine, as well as in most of its user countries, is unregulated, scientists (together with practitioners) have twice attempted to regulate the use of this device legislatively. The first try was in 2009, by preparing the Draft Law of Ukraine «On the Polygraph». Draft Law was prepared by the team of researchers and submitted to the parliament by the ex-deputy of Ukraine Gennady Moskal. The second time was in 2015, through preparation of the Draft Law No. 4094 «On the Protection of the Rights of Persons Audited by Polygraph Surveys». This Draft was prepared by specialists from the Ministry of Internal Affairs in conjunction with practicing polygraph examiners from the Ukrainian Bureau of Psychophysiological Research and Security and the Public Organization «College of Polygraph Professors of Ukraine». But the fate of this Draft Law, like the previous one, failed, as it was rejected at the stage of discussion in the committees of the Verkhovna Rada of Ukraine. Still, the possibility of revision and presentation to the Parliament remains.
Beloved husband, father, brother and friend, age 74, passed away on August 15th, 2018 in Boise Idaho, from injuries due to a motorcycle accident. Dave was born on July 5, 1944 in Porterville, CA to Ellis “Bud” and Jewell McNeill. The Family then moved to the Hood River, Oregon area, where he attended school and graduated from Wy’east High School in 1962. Dave served his country in the US Navy for 3 years, prior to joining the Bellingham Police Department, where he proudly served the community for 25 years, retiring in 1993 as a Detective and Polygraph Examiner. Upon retiring, Dave continued to utilize his expertise in investigation and polygraph through his successful business, which he planned to retire from later this year. Throughout his long career, he was member of the Northwest Polygraph Examiners Association, where he served as an officer for the majority of that time. Dave loved life and lived it to the fullest. He was the happiest when spending time with the love of his life, Lorie, whom he was married to for 38 years, his family, and his friends. He loved being outdoors. He was a kwon grill master and loved fishing, camping, showing off his hot rod, riding his Harley and tinkering around in his man cave. It was through these passions that he got involved in different clubs and organizations and made many life long friends. Dave was a real charmer and born storyteller. Anyone who met him would quickly want to be his friend. His humor was contagious and he regaled everyone around him with many fun tales of his adventures. Dave is proceeded in death by his parents Ellis and Jewell McNeill, his daughter Sharri McNeill, and his goldfish Jenny. Dave is survived by his wife Lorie, daughters Gina (Mark) Tapley and Reshelle (Tom) de Forrest, son Jarod McNeill, brothers Dan (Colleen) McNeill
and Doyle McNeill, father and mother in laws Max and Donna Costner, sister in law Sue (Ron) Victor, brother in law Wade (Michaelle) Costner, many grandchildren, great grandchildren, nephews, nieces and numerous other relatives.

Edward B. Sasser, age 76 of Montgomery passed away on Friday, January 11, 2019. Ed was a lifelong servant of Law Enforcement in the Montgomery area. He retired from the Montgomery Police Department and after retirement became an investigator for the State of Alabama. He is preceded in death by his wife, Betty Sasser; his parents, Dalton Sasser and Vernie Mae Mitchell; and his brother, Terry Mitchell. Ed is survived by his daughter, Tara Sasser Oliver; his granddaughter, Dylan Elizabeth Oliver; his longtime companion, Maggie Milstead; his sisters, Pat Maraman (Van) and Shirley Wise (Jimmy); his brothers, Wayne Mitchell (Wanda) and Larry Mitchell (Shelia); his sister-in-law, Laura Mitchell; and a host of nieces and nephews.

Michael Richmond began his federal career in 1976 when he began working at the National Institutes of Health while in high school. In 1980, Michael began his U.S. Postal Service career as a letter carrier in Washington, DC. He received his appointment as a Postal Inspector on August 24, 1991 and was assigned to the Richmond Division in Norfolk, VA. In 2001, Michael transferred to the Washington Division, where he worked an IC assignment. Shortly thereafter he was recognized for his abilities to communicate with people and to obtain confessions from criminal suspects. In 2002, his dedication and talent were awarded by achieving a promotion as the Program Manager, Polygraph Examiner and graduated from the Department of Defense Polygraph Insti-
Mike retired from the Postal Inspection Service in December 2011. In 2013, Mike became a member of the APA and a Contract Polygraph Examiner at DIA through 2018. Mike also worked as a Contract Polygraph Examiners at both the NRO and DIA during 2016. In March 2018 Mike became a Contract Polygraph Examiner at CBP until his passing on October 22, 2018.
Erika Thiel, Polygraph Manager at The Connection, prides herself on working collaboratively with her team members to be sure they have the best possible balance between work and personal life. When she was presented with the Patriotic Employer award from the National Guard, she couldn’t have been prouder.

Ms. Thiel was nominated for the award by Edwin Castano, a polygraph examiner on her team at The Connection. Mr. Castano presented the award on the day he transitioned to become a per diem employee. “I was surprised and honored. To ensure that he was able to perform his military duties seemed like a no brainer. I had no idea that there were companies that would argue against this. Learning that this award even existed just shows me how much passion our soldiers have for fighting for America while contributing to their community when they are not deployed. As grateful as I am for receiving this, it is eye opening and I hope employers continue to support our troops in the ways that we can.”

Serving in the Army National Guard requires flexibility from an employer to attend monthly drills and at times special training. After completing the process to become a polygraph examiner, Mr. Castano planned to attend six weeks of military training. Under Ms. Thiel’s leadership, The Connection was able to accommodate the leave needed for his military training.

Facilitating the arrangements for employees like Mr. Castano to be able to pursue opportunities such as military service in the reserves is a priority for The Connection. The Connection is a statewide human services and community development agency that provides unique solutions to the problems of improving child welfare, homelessness, mental illness, substance abuse and community justice rehabilitation. The agency serves 6,000 people each month around the state of Connecticut.
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54th APA Annual Seminar
August 25 - 30, 2019 - Orlando, FL.

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Polygraph 101 Basic
March 18 - May 14 Philadelphia.
September 9 - November 15 Philadelphia.
Guatemala: Contact school for dates.
Post Conviction (PCSOT)
May 27 - 31
November 18 - 22
Advanced Polygraph
July 22 - 23
Advanced PCSOT
July 24 – 25

2019-2020 VOLLMER POLYGRAPH CLASS SCHEDULE
Basic Course
April 1, 2019 to June 7, 2019.
July 1, 2019 to September 6, 2019.
April 6, 2020 to June 12, 2020.

AIIP POLYGRAPH SCHOOL SCHEDULE
Pretoria, South Africa
Stockbridge, GA.
September 9 - November 15, 2019.
Stockbridge, GA.
Pretoria, South Africa.
NPA UPCOMING CLASSES
Basic Polygraph Examiner Courses:
June 3 - August 9, 2019.
Willis, TX
September 9 - November 15, 2019.
Little Rock, AR

Specialized Sex Offender Testing /
PCSO T Courses:
April 1 - 5, 2019 Lafayette, IN
May 6 - 10, 2019 Independence, MO
November 18-22, 2019 Little Rock, AR

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TRAINING CENTER
Basic Polygraph Examiner’s Course
May 13 - July 19, 2019
In Cape Coral, FL
September 3 - November 8, 2019
In Cape Coral, FL

Advanced Examiner’s Course
March 25–29, 2019 Course Full
In Cape Coral, FL
July 22-26, 2019
In Cape Coral, FL
December 2-6, 2019
In Lafayette, IN

Post Conviction Sex Offender Testing
(PCSO T) Course
March 18-22
In Cape Coral, In

Use of an Interpreter Course
TBA

Use of Directed Lie Comparisons & DLST
Course
TBA

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TBA

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Email: Dirgeneral@latinpolygraph.com
Website: www.latinamericanpolygraph.com

INTERNATIONAL POLYGRAPH STUDIES CENTER

Director: Raymond I. Nelson
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Oficina 204, Col. Guadalupe Inn
Del. Alvaro Obregón
Mexico D.F. 06700
Country: Mexico
Phone: (55) 5533 7349
Email: iptc@poligrafia.com.mx
Website: www.poligrafia.com.mx

MARSTON POLYGRAPH ACADEMY

Director: Tom Kelly
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San Bernardino, CA 92408
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Email: info@marstonpolygraph.com
Website: www.marstonpolygraph.com

*Admission is limited to government or law enforcement students only.
MARYLAND INSTITUTE OF CRIMINAL JUSTICE:
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         Millersville MD 21108-0458
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Email: MDMICJ@aol.com
Website: www.micj.com

MINDEF CENTRE FOR CREDIBILITY ASSESSMENT*:
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         Mandai Road
Country: Singapore
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Email: cholanjoshv@gmail.com
Website: www.mindef.gov.sg/

NATIONAL ACADEMY OF POLYGRAPH OF THE NATIONAL POLICE OF COLOMBIA*:
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         Barrio Fatima
         Bogota
Country: Colombia
Phone: 57-3203023049
Email: programaacademicopoligrafiapc@gmail.com
Website: No website

NATIONAL CENTER FOR CREDIBILITY ASSESSMENT*:
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         Fort Jackson, SC 29207-5000
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Phone: -
Email: NCCARegistrar@dodiis.mil
Website: www.ncca.mil

NATIONAL POLYGRAPH ACADEMY:
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         170-366
         Lexington, KY 40509
Country: USA
Phone: 859-494-7429
Email: shaw.national@gmail.com
Website: www.nationalpolygraphacademy.com

NCTC POLYGRAPH INSTITUTE:
Director: Elmer Criswell
Address: c/o Dept. of Military & Veteran’s Affairs Building 8-64 Fort Indiantown Gap
         Annville, PA 17003-5002
Country: USA
Phone: 717-861-9306
Email: register@counterdrug.org
Website: www.counterdrug.org

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NEW ENGLAND POLYGRAPH INSTITUTE
Director: David J. Crawford
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        Center Harbor, NH 03226
Country: USA
Phone: 603-253-8002
Email: kacdc@worldpath.net
Website: www.newenglandpolygraphinstitute.com

TUDOR ACADEMY
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Email: info@tudoracademy.com
Website: www.tudoracademy.com

PEAK CREDIBILITY ASSESSMENT TRAINING CENTER
Director: Benjamin Blalock
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        Cape Coral, FL 33909
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Phone: 239-900-6800
Email: info@peakcatc.com
Website: peakcatc.com/

VIRGINIA SCHOOL OF POLYGRAPH
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Email: polygraph11@comcast.net
Website: http://virginiaschoolofpolygraph.com/

THE POLYGRAPH INSTITUTE
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        San Antonio, TX 78258
Country: USA
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Email: info@thepolygraphinstitute.com
Website: thepolygraphinstitute.com

VOLLMER POLYGRAPH
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Hello, fellow APA Members.

With winter definitely here, I hope everyone is doing well. We are all still busy within the Association. Our Board Members are continuing on their projects to benefit the APA.

Your Board and others have been hard at work organizing the Seminar in Mexico City. There has been quite a bit of interest from our Members in Central and South America. Anyone interested can find information on our website or call the APA Office.

I have had several inquiries over the last two months regarding Standards and requirements of Examiners. I welcome the questions and I am glad to help when I can. I again urge Members to familiarize yourself with the APA Standards of Practice and follow them. Standardization makes our Profession stronger and more easily defendable.

To all of our Board Members and Committee Volunteers, I again thank for all of your hard work. It’s with your dedication and diligence that the APA continues to grow and prosper.

As President I continue to assist Members with issues as requested and am working with several Board Members to achieve their goals. I remain committed to the APA Mission to provide training, best practices and professional resources for the continued growth of ethical and evidence based detection of deception through the use of polygraph.

As always, feel free to call me (706-506-0830) or email me (sduncan071@gmail.com) if I can be of assistance to you.
Jamie McCloughan  
Chairman of the Board

What is the future of polygraph? Are we at a point where no further accuracy or improvements can be made? These two questions, along with others, are what we as professionals should be asking ourselves.

As for the first question, we are not the only forensic science asking ourselves what the future holds. Others are looking at ways to incorporated algorithms into their procedures. Algorithms allow for consistency/reliability in observations of data. The reliability is a direct correlation to the second question of accuracy, as a test can’t be more accurate than it is reliable.

So, should we be looking more to automated processes within polygraph to help increase our accuracy? Talking with other polygraph professionals, there is both excitement and apprehension when it comes to the discussion of utilizing algorithms. For decades, polygraph has been an expert driven profession. Personally, I don’t believe that the examiner can be completely removed from the procedure, as there are applications that require human interaction. However, the use of algorithms doesn’t eliminate the examiner from the process. Are we ready for this as a profession? That question can’t be answered by me. That is a question that the profession needs to consider and answer.

The APA has the largest membership of any professional polygraph association. So, I ask you, are we ready for the future? What do we need to do as a profession to become better for our clients? Please feel free to contact me with your ideas, as I want to know what others think.

If you have any questions or suggestions on anything else APA or polygraph related, please feel free to contact me. As always, may those who are fighting for our freedom against threats, both foreign and domestic, be safe, and have Godspeed in their return to friends and loved ones.

Donnie Dutton  
Director

Happy New Year. I hope that all of you had a grand time through the holidays and that you are not overwhelmed with being back to work. Seems it is always so hard for me to get back into the swing of things after the holidays.

President Duncan tasked me with putting together a state association list with current contact information and an additional list of states that have a licensing require-
ment with points of contact. These two projects are underway and being completed by members who generously volunteered at the last APA seminar to help. It is my hope to have the projects completed by April. Once completed I will submit the information to President Duncan for dissemination to members either on our APA website or in print.

Another assignment that I was given was to develop a way forward for our “Divisional Members” category. This document has been completed and provided to President Duncan who will address it at our winter board meeting. The document was developed in coordination with our Divisional Members along with input from concerned folks who attended our last annual meeting. I will send the final approved document for publication in advance of a vote at the next APA seminar.

CALLING ALL EXAMINERS – I NEED YOUR HELP

We need a new database of confirmed polygraph cases that we can use to evaluate Credibility Assessment (CA) & polygraph products from time to time. The cases in the existing database have been seen by all the manufacturers as well as other researchers/scientist in the field. Its usefulness has diminished over time, and we need to develop a new confirmed case database. I suspect that we in the APA administer thousands of confirmed cases a year that we could be collecting. I have a plan but need everyone’s help.

When you have a polygraph case in which the examinee confesses to the test issue after the exam it can be considered confirmed. The seizure of corroborating evidence would strengthen that confirmation. Another basis for confirmation would be a case in which additional evidence exists that independently establishes ground truth. An example might be a polygraph exam about illegal drug use (cocaine) along with a positive or negative urine test for cocaine. Another example would be a case along with a video recording showing your suspect doing the crime; you get the idea. When you have a confirmed polygraph case in which someone else confesses to the crime clearing your subject that would be a polygraph case we could also use.

The database project is in the concept stage. Much more work needs to be done and we will need to address critical issues of confidentiality, data integrity and data protection before we make a call for confirmed cases. When the project is completed the database would be an invaluable resource to researchers and ultimately a benefit to all of us. I need volunteers to help get this off the ground.

Year after year I have heard members say that they have volunteered to serve on a
committee but were never contacted or others just say to let them know what they can do to help the APA. Here is your chance. I know that we have folks out there that want to make this database happen so if you are interested in helping organize the project please contact me at ddutton443@gmail.com.

Walt Goodson
Director

Greetings fellow professionals:

I hope my board report finds you well and soaking up some vitamin D from the late winter’s longer, sunnier, and warmer days. If not, you can move to my home state of Texas where February is the first month of summer. The purpose of this report is to provide you with an update into the Ethics and Grievance Committee’s (E&GC) work since President Duncan assigned the committee to me this past September. Additionally, I am going to share with you a few insights into the types of grievances the APA has recently received and provide you with some of their underlying details. My intent in illuminating these complaints is so that we can all learn from some of the common pitfalls that lead to examinee and or client dissatisfaction.

First of all, I’d like to recognize the members of the committee that do all of the work. Steven Adang has served on the committee for many years and is always willing to help with an investigation. Bill Gillespie has also served as the chairman and member of the committee for many years and does much of the committee’s heavy lifting. Christopher Lombardi has served for a few years on the committee and has been instrumental in investigating several complex grievances as well as drafting an outstanding E&GC Policy. Said Khamzin, Kris O’Neill and Umar Shabazz are newer members of the committee and have provided excellent help so far. Thank you all for what you do.

Here are a few of the E&GC stats I hope you find interesting: In September 2018, the newly formed E&GC inherited seven open grievances and has recently resolved five of them. It’s important to understand the broad goal of the E&GC is to gain a member’s compliance with the APA’s Standards of Practice and impartially and expeditiously investigate all allegations of misconduct against members of the Association. Misconduct is defined as any violation of the APA Code of Ethics or involvement in a felony crime or its equivalent. Additionally, complainants must submit their grievances in writing in English to the APA National Office, and the alleged violation must have occurred within two years of filing the claim. To gain a member’s compliance the E&GC grants members, who commit infractions of the APA’s Standards of Practice, 30 days to demon-
strate compliance with these standards. Members who correct first-time violations of these standards will have their complaints closed without further action.

Since the establishment of the new E&GC, this past September, complainants have so far submitted four grievances to the National Office. The committee has already resolved two of these grievances. The remaining two are currently under investigation/review. At least two other inquiries were submitted to the National Office; however, they were not ultimately assigned to the E&GC due to either not stating an allegation in violation of our Standards of Practice or Code of Ethics or the complainant didn’t have the standing to complain. Lack of standing typically involves a third party filing a grievance that doesn’t have any direct involvement with the polygraph examiner. An excellent example of this is a wife complaining to the APA that there’s no way her husband could have passed a polygraph because she has evidence that he is cheating on her. I will elaborate more on these types of tests later.

Before I go any further, I want to point out that the APA opened seven grievances in 2018. Of those seven, the committee has already closed three of these grievances as unfounded and determined only one so far that will be referred to the APA Board of Directors for a recommendation of whether to take formal actions against a member. Considering our membership count in September of 2018 was nearly 3000 members, seven complaints equate to two-tenths of one percent of our members receiving a complaint in 2018, and only a fraction of those grievances gave cause to the E&GC to recommend corrective action or sanctions. I think this statistic speaks volumes for the high standards of our Association and membership. Of course, there’s always room for improvement, so I want to share with you the types of complaints recently submitted to the committee in hopes that we can be mindful of some of these pitfalls and perceptions.

• Two separate claims challenging the examiner’s evaluation of the test data (this is not a grievance the E&GC will review).
• The exam duration was too short.
• The examiner would not provide the results of the exam to the examinee.
• The examiner disclosed the results of an exam to a third party without authorization.
• The examiner didn’t hand score the exam.
• The examiner accepted payment to change a call.
• The examiner violated PCSOT policy.
• The examiner refused to provide the examinee with a polygraph report.
As you can see, many of the above grievances are not always violations of our Standards of Practice or Code of Ethics. Moreover, the E&GC merely is unable to find evidence to support many of these claims. Contributing factors that make some allegations challenging to investigate is that approximately one-third of them come from countries outside the US. In many foreign cases, time differences and language barriers make communication and gathering evidence difficult. Secondly, many complainants submit an e-mail alleging their complaint but are not able to produce any other information or evidence of a violation to help the committee substantiate their claim.

From my four plus years of experience of serving as the General Chair of this committee, the three common factors I see that lead to complaints are infidelity testing, poor customer service, and friendly fire. Over half of the above grievances were the results of infidelity testing, and if you know me, you know where I stand on conducting these exams. Poor customer service is a second significant source of complaints. Poor customer service usually involves poor communication with the examinee. Examiners could have avoided many of the grievances, I’ve seen over the years, by just returning an examinee’s call. Finally, a substantial percentage of claims are either filed or encouraged by other polygraph examiners that were retained to conduct a “second opinion” polygraph. Of course, examiners in the same competitive market conduct many of these follow-up exams, which can leave the committee questioning the motivation of the complainant. I’m not going to comment further in this area other than to say I don’t think this phenomenon occurs at the same frequency in other professions. Maybe I’m wrong, and that wouldn’t be the first time.

I hope you found this information helpful and it provides you with something to ponder. Thank you as always for your dedication to making this world a better and safer place. I hope you have a wonderful spring.

Brian Morris
Director

The Research and development committee has not had any new projects, developments, or research presented for review since our last report. We look forward to any new developments or projects that individuals or groups wish to present to our committee.

We are also anxiously looking forward to the upcoming annual conference in August and hope to see each of you in Orlando.

Best wishes.
FROM THE BOARD

Roy Ortiz
Director

Awards Committee

There are seven months and counting until the 2019 APA Annual seminar in Orlando, Florida. Nominations are still being solicited, sounds just the movie “Ground Hog Day”. For those of you not familiar with the movie, a cynical television weatherman’s day (Ground Hog Day) is repeated until he does everything correctly.

The APA is an organization composed of polygraph examiners that want to improve their skills and stay current with the latest developments in the polygraph profession. That only happens when someone steps up to the plate and contributes: volunteers, instructors, researchers, writers and hard working examiners. Members in the field (private, government and law enforcement), have first-hand knowledge who the examiners are that make a difference.

Please send your nominations to: directorortiz@polygraph.org

Technology Junction

Popular Technology Myths
31% Believe airport X Ray machines can wipe the memory on a cell phone or laptop.
17% Think you can only charge a cell phone when it is at 10%.
52% Believe charging a cell phone over-night can ruin the battery.
30% Think that a computer must be shut down every night for it to run properly.
17% Believe that “MACS” can’t get a virus.
86% Believe smart phone cameras with more megapixels capture better pictures.
*Sensor size is more important.

International Membership Committee

The first APA seminar in Mexico City is fast approaching (last week of April). The entire Board of Directors is hard at work to make this a successful seminar. APA members: Sabino Martinez, Luz Del Carmen and Manuel Novoa have been instrumental in planning for this seminar.
I will be presenting Interviewing and Interrogation (what you should never do and what you should do every time), analyze real crimes to determine interrogation strategies and review the four stages of learning a new skill.

Professional Development Committee

Recently a member sent me an e-mail concerning advanced training. His question: why would someone attend training if the speakers were not APA members and were not in the polygraph profession? Would it be more beneficial for an APA member to attend the annual APA seminar?
Continuing Education Training courses attended by APA members must be reviewed to obtain the APA’s approval. The presentation outline, learning objectives and instructor resumes are reviewed and must be related to polygraph.

Every instructor whether teaching at an annual APA seminar or at an advanced course, brings their own personal expertise (education and experience) to the table. Each instructor is subject to student evaluations. APA members are tasked with the decision of selecting the training course they will attend, based on their personal schedules, budgets, interests and research.

APA accredited schools, state polygraph associations and private vendors are among those that sponsor advanced training. I am sure that students share their opinion about the training they attended, with other APA members. Certain topics and speakers will continue or be eliminated based on the demand and personal recommendations.

Pamela Shaw
Director

Hello fellow APA members!

I hope each of you had a wonderful holiday season and that you are off to a great start in 2019! I am looking forward to the year ahead and hope that you are already making plans to join us for our annual seminar in Orlando, FL. As many of you know, this is a beautiful property and a great opportunity to add a few days get-away with your family and friends before or after the seminar event. I know our Seminar Chair, Mike Gougler, is working hard to bring a great lineup of topics and speakers to make this year’s annual seminar another great learning experience. Even though plans are in the works, it’s not too late to let us know if you have some topics you’d like to see presented. We always welcome your feedback and suggestions!

As Chair of the Membership Committee, I have been spending the past couple months working with our National Office Manager, Lisa, to update our internal standard operating procedures for membership. We are also working to update the current membership application so that it is more simplified and streamlined. During this time of revision, I was reminded of a benefit for our international members that I want to highlight and bring back to the attention of those who may not be aware. In recent years, it was determined by vote of the entire membership that all Members would have to have a bachelor’s degree or higher, but for degrees earned outside of the United States, it would be necessary to have the degree verified as equivalent and recognized by the international educational community as meeting similar standards. This responsibility for verification falls upon each individual seeking
or wishing to maintain Member status. This verification process is a service provided by entities outside of the APA, and consequently, their services come with an additional cost. In some cases, upwards of $125. In light of this requirement, the Board of Directors voted some time back to alleviate most, if not all, of this financial burden to assist and encourage individuals wishing to upgrade by agreeing to provide a $150 credit on that person’s next year’s dues after providing successful verification of their degree meeting US equivalency. With this in mind, it is my hope to encourage all international Associates and/or current Members who have not previously provided such verification of their degree to take advantage of this opportunity for financial supplementation.

Regarding our international community and members, I also wanted to take a moment and encourage everyone in our community to consider supporting and attending an upcoming seminar that the Association is hosting in Mexico City, Mexico from April 25-27, 2019. While we have, and always will hold our annual seminars in and around the United States, there have also been attempts over the past 8-9 years to hold similar seminars in other parts of the world so that those who may not be afforded the opportunity to travel to America will have the chance to interact with other professionals from around the world and feel welcomed into our polygraph community. If your schedule and availability allows, we hope you will register for this 3-day seminar in Mexico City, and of course we still hope to see you in Orlando!

As always, it is an honor to serve you. If there is anything I can do to be of assistance, please don’t hesitate to let me know.

All the best,
Pam.

Erika Thiel
Director

Hello and Happy New Year!

The Communications and Public Relations committee has finally formed and is in the beginning stages of making this committee into something that promotes more information on a regular basis to all members. The committee is diverse and from all over the globe for one of the first times ever which allows us to reach more members in what has been recognized as an association that goes well beyond America. Please pay attention to the information being published via social media, the website, and in your emails.

Also, have you heard about the Latin American Seminar that is taking place in 2019? This is a great opportunity for those who are not able to make it to seminars that are located in America. There are great speakers who are attending and there is
still a discount for early sign up and payment. All information can be found on the website, on all three social media platforms (Facebook, Twitter, and Instagram) and in your e-mails.

I hope each examiner out there has made it a goal for themselves this year to think of ways to utilize their membership of this association. This may mean getting more involved in a committee, writing papers for the magazine, running for elections, or even putting forward an article for the journal. This is your association and we want to hear more from you! This is the only way this association can grow and advance in a growing world of deception detection.

¡Hola y feliz año nuevo!

El Comité de Comunicaciones y Relaciones Públicas finalmente se formó y está en las primeras etapas de hacer de este comité algo que promueva más información periódicamente a todos los miembros. El Comité es diverso y de todo el mundo por una de las primeras veces. Esto nos permite llegar a más miembros en lo que se ha reconocido como una asociación que va más allá de los Estados Unidos. Preste atención a la información que se publica a través de Facebook, Instagram y Twitter, así como en los correos electrónicos y en el sitio web.

Además, ¿has oído hablar del seminario latinoamericano que tendrá lugar en 2019? Esta es una gran oportunidad para aquellos que no pueden asistir a los seminarios que se realizan en los Estados Unidos. Hay excelentes oradores y todavía hay un descuento por inscripción anticipada y pago. Toda la información se puede encontrar en el sitio web, en las tres plataformas de redes sociales (Facebook, Twitter e Instagram) y en sus correos electrónicos.

Espero que cada examinador haya hecho de este año una meta para ellos mismos para pensar en formas de usar su membresía en esta asociación. Esto puede significar involucrarse más en un comité, redactar documentos para la revista, postularse para la elección o incluso enviar un artículo para la revista. ¡Esta es tu asociación y queremos saber más sobre ti! Esta es la única forma en que la APA puede crecer y avanzar.
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  - Walt Jones (Federal and Private Experience)

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About Diana’s painting

“Polygraph to me is like art. For example, preparation for testing as a theatrical performance; art of conducting a pre-test interview; evaluation of the results and the complexity of the decision as an artist’s feelings...And at the same time, the person is incomprehensibly complex. His reactions and their connection with physiology are very interesting and unique.”

Artist - Anastasiia Protsiuk
photographer Alexander Alieksieiev (brother and polygraph examiner, he is a member APA, last year he inspired me to study as a polygraph examiner).

Diana Alieksieieva-Protsiuk
Creation
By : Gur Segev Ronen (G.S.R)

Creation is an abstract term that describes reference to something as the product of complex processes of added subjective value.

The practice of polygraph science has been going on for more than a century, during which researchers have studied, developed and created instruments, techniques, concepts and ideas.

As a member of the global polygraph community, I was intrigued to find a niche that deals with a polygraph from the perspective of free work or as one might say from the angle of art.

Unfortunately, I did not find any documentation of “Polygraph art” from the abstract angle and after conversations with a number of colleagues, I realized that they, too, did not know about the “polygraph art”.

To my delight, I found a sympathetic ear from the publishers to publish in the APA
magazine. They have agreed to give a platform to some of the works of art that I have created over the years.

Over the coming period we will present works of art which their common denominator is the Polygraph.

I hope that the publication will lead other people to deal with this issue alongside the important profession we deal with on a daily basis.
Contacts with friends are so important. I recently experienced a very helpful assistance as a result of contact with a good friend of mine. This was actually an issue related to the article I write that appears in the American Polygraph Association Magazine. And after this all occurred, I stepped back a moment to appreciate not only what my friend Mark Handler provided me with, but to realize how important it is in life to have such good friends and good friendly relationships.

The more I thought about this I started thinking about other friends that I have that are linked to this profession of polygraph, and it then it kept moving on an on to the point of realizing how important it is to obtain and keep acquaintances and alliances. And it’s not only in this profession, but especially with the people you probably need the most in life as well. This also includes when you have no idea how or where you’re going to need them.

Yes it’s true, that alliances are tricky, trickier in real life than on that crazy TV show “Survivor.” Research has probably come a long way in determining how and why we choose to rely on certain people more than others. But I think the bottom line is that we all want to believe in each other, we’re humans. I’m thinking that without having social interactions, we wouldn’t survive. That had to be true going all the way back in the Stone Age, and it’s certainly true now.

So how do we go about finding people who will help us develop and grow in life. I’m obviously no expert on this, but it probably starts with developing your instincts, at least that’s what I was thinking. This probably starts way back as a child. Personally where I grew up, we had a playground in the neighborhood called the “Canada Ball Field”. It really wasn’t in Canada, but I’m told that this part of the city where I grew up was initially labeled
as “Canada”, because in the early 30’s, Canadian railroad workers came in from Canada to assist building the railroad from Chicago to Northern Indiana. They chose to build homes and live in this area of the city, and they say that’s why it was and it is still called, “Canada.”

Anyway, getting back to this idea of developing social interactions and friendships, I think we learn social relationships even on the playground as kids. We learn who is the bully? Who can be trusted? Who is smart and who is just dumb, who is a pretty good baseball player, and who is not, and who is only looking out for themselves? Stuff like that.

But as time passes and when we mature, that instinct doesn’t seem to be as clear. Maybe the person you should distrust happens to be very charming and you don’t see through that right away. And on the other hand maybe it’s like that shy kind of guy that I know who doesn’t speak much to me in APA Board Meetings but is actually someone who is willing to go to bat for me. The point is there are shades of grey when it comes to people. The truth is that maybe we have to be burned a few times in this process. Maybe that’s how we learn. Here’s some tips I’ve come up with over the years that have helped me. One is to build friendships of close advisors. These people know you and your professional occupation; these friends have been right with you through the good times and bad.

As I’m reviewing these friends who have been of great assistance to me, valued and respected relationships come up first. I’m starting with Raymond Nelson, who is and has been strongly involved with scientific and usable polygraph development, and a good friend of mine at the same time. Barry Cushman has also been a good friend for many years, and not only to me, but a dedicated friend to our profession as well. I’ve must to have known Barry for about 20-years now.

There is another individual who is etched into my development in this vocation over the years, and that’s former Lafayette Executive Chris Fausett. Chris was so important getting me involved with the right and most up to date instrumentation as it continued to develop. We developed a friendly relationship above and beyond this business connection. He is presently retired, and yes, I miss him.

In continuing to think of past polygraph friendship development, shortly after graduating from initial polygraph training I joined the Indiana Polygraph Association, and quickly made friends with its president David Motsinger. We also became close friends, and it is extremely sad that he passed away at such a young age. The APA was aware of David Motsinger’s accomplishments and after his passing, established “The Motsinger Award.”

Going back in recollections, a number of my friendship experiences came about
in the late 90’s when I became a member of ASTM. It was here that I met Federal examiner John Schwartz. This relationship was unique, educational, friendly and entertaining all at the same time. This relationship is filled with happy memories. However, I need to also relate one of the most outstanding friendships that developed about this same time, that I have the greatest respect for, which is my relationship with Donald Krapohl. Wow, his knowledge and professionalism is fantastic. I am proud to say we are friends. I feel most fortunate that this meeting and relationship with Don ever occurred, and it again takes me back to realizing how fortunate I have been with these outstanding contacts.

The American Polygraph Association itself has also been quite significant in the development of good, positive relationships. When I start to think of the APA, I have to give the greatest amount of credit and professionalism to our General Counsel, Gordon Vaughn. There are associations who do not have anything close to this kind of legal competence, and I also feel that Mr. Vaughn and I have the kind of personal friendly relationship that I’ve been talking about. It took a little time to develop, because this is truly a busy guy, but I feel fortunate that it has occurred.

The APA membership is blessed with many wonderful people that I feel close to that I would also like to share mentioning in this article. These are people who I feel not only to be quite polygraph knowledgeable, but who I also regard as friends. I know I’m probably going to miss somebody in listing these recollections, but I want to start with Mike Gougler, Steve Adang, Ben Blalock, Rick Jordan, Elmer Chriswell, Barry Woodgate, Chuck Slupski, Pam Shaw, and I want to also add Lisa Jacocks, she helps so much in this organization. And yes, there is certainly a bunch more.

The point I want to make here however is that I’ve been a Board Member of the American Polygraph Association going on 9-years, and at some point I will consider leaving the board. Of course my polygraph examination firm will continue, my membership in the APA will continue, and I plan to continue writing my article for the APA Magazine “Words of Wisdom.”

But the matter I wanted to talk about in today’s article is related to my thoughts of team leader behavior, finding and making the most of the relationships you’ve built. From my experience I made some observations I thought I’d share. This had to deal with correctly, and sometimes not correctly utilizing members of a committee. An obvious foremost idea is to build a circle of advisers, and I’m talking about close advisers you can trust. Often times these people have been right beside you through good times and bad. You also need people who know what they’re talking about, and they don’t always agree with everything you say. You can’t surround yourself with yes people. I don’t
think that kind of “Group thinking” always brings growth.

These people could also be some you might not expect. For example, let’s say you were just appointed as a director of one of the APA Committees, or the chairman of a polygraph assemblage in a law enforcement agency, something like that. Instead of just replacing everyone, take some time to get to know the present committee group. After all, they’ve probably been there longer than you have. Those could turn into valuable relationships.

Next, let’s talk about listening. Many of the world’s most successful leaders I’ve told are Type A personalities. They have a drive, tenacity and presence that helps them lead persuasively and efficiently. But I think the downside is that many of these same leaders think they have all the answers. I have to say, I’ve seen this in my experience with some Committee Chairmen and some Directors. When a team member approaches with an idea or issue, the leader I’m talking about is already thinking about their response, and often a negative response, before even listening to the whole statement or reply.

Develop your listening skills. You never know when a fantastic idea just might come from someone you didn’t expect. Just because an individual isn’t on your creative staff list, that doesn’t mean they aren’t creative. The point I’m making is be open to new ideas and maybe even from unlikely sources. You can’t surround yourself just with yes people.

Now if you’re a leader, it comes with some benefits of course. Maybe you’ve put in the hard work, and now you don’t have as much of the daily grind as you did before. But it also comes with the responsibility of more people who are depending on you to make decisions that are going to benefit them in their work and profession. So when you’re dealing with an issue, listen to your trusted advisors. Get opinions from people you know. Narrow them down to a few options, and also think about any ramifications that may be present with these decisions. I guess it’s obvious also that decisions are not going to make everybody happy. That’s just probably life. So before you start to light fuses, you need to know what could potentially blow up.

At the end of the day, you simply have to make more decisions than the rest of your team. That’s why you’re the leader. Obviously some answers are easy decisions. Things like booking a personal vacation doesn’t require much reflection. But when you’re making the real decisions – like maybe moving a staff member to a different position, changing a standard, eliminating some form of committee process that’s always seemed important, or making a risky business decision – those require time and honest reflection.

You might not always make the correct or best decision, but you made a choice. And
that’s sometimes more important. When you’re wrong, have the courage or humility to say, “I was wrong.” Be open and honest with your team and your associations. That will only serve to build trust. And remember finding people who will always be in your corner is never easy, and it doesn’t happen overnight.
All scientific test results are fundamentally probabilistic, including when reduced to categorical results. Probabilities document and communicate the strength of information when the information is known to be imperfect. *Probabilities* (decimal probabilities) and *odds* are two common forms used to convey probability information. Fundamentally, all probabilities are a comparison of something and something else. Odds and probabilities are two different ways to express the strength of information under uncertainty. Professionals who work with probabilities will want to be conversant with both forms—and how to transform each form to the other.

**Decimal probabilities**

Decimal probabilities are highly useful for persons with some formal education or training in the computation or use of probabilities and probabilistic information. Frequentist statistical methods commonly make use of decimal probabilities. With minimal effort and some concentration they are not difficult to understand.

All probabilities values are a contrast of the likelihood of some categorical knowledge or conclusion about the possible state of reality and the likelihood of another possible state of something in the universe of reality. Use of decimal prob-

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1 Raymond Nelson is a psychotherapist and polygraph examiner who has conducted numerous polygraph examinations in private practice, and has testified as an expert in both polygraph and psychotherapy matters in a variety of U.S. courts. Mr. Nelson is a Past-President of the American Polygraph Association (APA) and is currently serving as an elected member of the Board of Directors. Mr. Nelson has published numerous articles on all aspects of the polygraph practice including field practices, analytics, and technologies. Mr. Nelson is research specialist with Lafayette Instrument Company (LIC), where his work involves the development, validation and marketing of polygraph instrumentation and methodologies. There are no proprietary interests associated with the information in this manuscript, and the information provided herein are the views and opinions of the author and not necessarily those of LIC or the APA.
abilities require that the probability value of interest is mapped into an imaginary or conceptual space (probability space) between zero (0.00) and 1 (1.00). Likelihoods associated with different possible categorical conclusions about reality can then be imagined or visualized as the proportion of values that are either greater than or lesser than the probability value within the conceptual probability space.

**Odds**

Odds express the exact same information as decimal probabilities, though they may be more intuitive for persons who are less familiar with the use of decimal probabilities. Odds are capable of conveying probabilistic information – which is inherently comparative information – using integers (whole numbers) that clearly illustrate the comparison of some likelihood and some other likelihood. By convention, odds are often expressed as “X to 1” where “X” is a whole number. When the likelihood of X is less than 1, odds can be express in the inverse form “1 in X chances” where X can be thought of as the frequency of events for one category that is expected to be associated with 1 occurrence of the other category.

Whereas decimal probabilities are bounded by 0 and 1, odds are unbounded and can go to infinity. More importantly, odds are readily amenable to demonstration with physical items or pictures that can be manipulated physically. For this reason, use of odds may make probabilistic concepts and probabilistic information more accessible or tangible for persons with less practice and familiarity with statistical concepts and probabilistic information. Sports statistics, survey results, and wagers are often expressed in the form of odds.

**How to transform decimal probabilities to odds**

Decimal probabilities can be transformed to odds using the following formula.

\[ \text{Odds} = \frac{p}{1 - p} \]

Working through a simple example can be a very useful way to develop deep understanding and intuition for any mathematical or abstract concept. Consider the following example, involving a decimal probability of .67:

\[ p = .67 \]

Simply plug the number into the formula above. Then reduce the mathematical values to obtain the answer in the form of odds.

\[ \text{Odds} = \frac{.67}{1 - .67} = \frac{.67}{.33} = 2 \]

Remember that odds are commonly expressed in the form “X to 1.” So that a probability value of .67 is equivalent to:

Odds = 2 to 1.

**How to transform odds to probabilities**

Odds can be transformed to decimal prob-
abilities using this formula:

\[ p = \frac{\text{odds}}{1 + \text{odds}} \]

Plug the numbers into the equation. Then reduce the value to obtain the result.

\[ p = \frac{2}{1 + 2} \]
\[ = \frac{2}{3} \]

An odds of 2 to 1 is equivalent to:

\[ p = .67 \]

Both mathematically and conceptually, odds and decimal probabilities can convey the same information. Use of one or the other can sometimes be a matter of personal preference, though it is often a matter of established convention. For example: For example: discussions of odds – prior odds and posterior odds – is also central to the process of Bayesian analysis (i.e., use of Bayes’ theorem to calculate probabilistic outcomes). As an example of Bayesian analysis in applied practice: polygraphic test data analysis using the ESS-M (multinomial) analysis method will provide the likelihood of deception or truth-telling in the form of a posterior odds. All professionals who use scientific tests, and those who make use of scientific test results, should have some reasonable familiarity with the conceptual foundations of probability theory – including how to write, talk and think about probabilistic information. Professionals who attempt to make use of test results without the ability to communicate and make use of probabilistic information may be at risk for inadvertent endorsement of unrealistic expectations or perceptions about the meaning and use of scientific and test analytic results. It is hoped that this small discussion and example of decimal probabilities and odds will facilitate the development of knowledge and intuition among professionals who may not already be familiar with their use.
I remember a conversation that emerged, towards the end of my Basic Training, where two of the instructors were discussing their dislike for fidelity testing. They talked about the emotional volatility, manipulative nature, and poor follow through of clients in this area of polygraph. One of the instructors made a statement that resonated: “save your money for a therapist.”

A few years later I was at an APA conference. There was a conversation among a few examiners about some of the challenges of screening exams and someone mentioned fidelity testing, and one of the examiners in the group said something to the effect of: “polygraph is for the protection of the innocent.” The message was clear, polygraph does not belong in that arena, it is a tool to protect the innocent from criminals not for couple’s therapy.

Then one day at the office I took a call from a young man that was requesting a fidelity maintenance exam. This young man had moved from another state and his previous therapist had encouraged him to do fairly frequent maintenance exams as he and his wife worked through their trust issues and worked to reestablish a baseline of trust in their relationship. Having never performed such an exam I reached out to my mentor and asked his opinion about such tests. In line with the general response I had experienced he stated that he avoids fidelity tests. Then he added, but if they are working with a therapist I would make an exception.

Returning to my phone call with this young man I asked if he was currently working with a therapist. He had transferred from a couple’s therapist in his state to a therapist in our state. And the polygraph was considered an integral part of his process by both of his treating clinicians (past and present). In that all the ducks were in a row I decided to accept the case. Unfortunately, I had not thought through the interview process very well and by default I used the same semi-structured interview I do with my PCSOT clients. I did not take long to realize that there was a mismatch.
Although the basic interview covered most of the important content that the therapist was interested in, it also covered a lot of peculiar sexual behaviors that may not have needed such an emphasis but even more awkwardly there was a lot of maintenance and monitoring questions that were completely irrelevant to someone not on formal state supervision.

With my interest peaked I started to explore literature in the area of couples’ therapy. After reading a few different books I collected themes that seemed to come up in the literature and began to write an interview specific to this population. Once the initial draft was completed I sent it to a few couple’s therapists for feedback. In time I had a cogent interview for both fidelity maintenance and history exams. That was my first step in the direction of serving this population that seems to have been marginalized within some portions of the polygraph community.

Over the last few years I have held to the standard of only providing fidelity testing in the context of a therapeutic triad. In PCSOT there is the accountability triangle of treatment, supervision, and polygraph. Drawing from this model when I perform fidelity testing I work with the therapist and the examinee’s partner as the accountability triad. Anytime I set up a fidelity exam, the next step is to contact the therapist and the partner for background information and to acquire a handful of questions they are particularly interested in exploring/resolving. In addition, I always delineate the importance of maintaining one time period as the frame of reference. Most therapists/partners want a fusion maintenance and history polygraph, which would violate the formal APA standards regarding testing for a single time period.

Once the polygraph is completed, the report goes to the therapist. The therapist’s responsibility is to make sure the information is processed responsibly. In the pretest interview my role is to acquire as much information as possible regarding the individual’s behaviors. The therapist’s role is to ensure the information is used in a healing manner for the good of the relationship.

I receive weekly phone calls to complete fidelity exams for people that are not involved in therapy. In such situations I echo the sage advice from my initial polygraph instructor: “Spend your money on a therapist, it will be money better spent.” There are times that people will ask for names of therapists they can reach out to. I personally keep a quick list of therapists that I can e-mail to the caller. Then inevitably at some time in the future I will have a referral from the therapist to complete the exam. But now it is being done within the safety and context of a therapeutic system.

In the event that the individual does not want to do therapy, and just want the exam, I refer them to other local examiners. I remember one time receiving a call
from one of these polygraph examiners that basically said, “Ok, Jared... what’s your angle? Why are you sending all these clients my way that you could just as easily pickup?” My answer was simply that I only work by referral.

The reason for this position three-fold: 1) confirmation bias 2) liability and 3) efficiency.

**Confirmation Bias**

Confirmation bias is simply the psychological phenomena where all information is filtered at a preconscious level to align itself with ideas that one already believes. The brain operates through complex webs of neurons known as neural networks. As neuronal connections are made, they begin to bond to speed up and simplify the thinking process (Hebbian Plasticity Theory). The end result of all this brain activity is that we can better filter the immense amount of information that our brain is trying to process by better attending our focus to areas of perceived importance.

In a recent journal article entitled “Believing is Seeing” Krapohl and Dutton presented an interesting experiment that illustrated this point in terms important to us as polygraph examiners. The basic breakdown of the study is they had 15 charts selected because of concurrence between the hand score of the original examiner and quality control. This included 5 clearly NSR (+12), 5 clearly SR (-10), and 5 IC (-0.7). Roughly ½ of the examiners were told all 15 charts were confirmed truthful cases, and the other half were told all the charts were confirmed deceptive. The researchers are covertly shaping the bias of analysis. The end result was a clear drift in the overall scoring pattern in the direction of the planted expectation. The conclusion of their journal article reinforced the importance of an independent blind scored QC. “At a minimum it would seem reasonable all examiners could refer to algorithm results to help protect their polygraph chart analysis from bias, as well as eroding influence of fatigue, haste, and distraction.”

This is such important information because it demonstrates the human tendency to simplify thought. To allow the pre-established neural networks to simplify the workload by filtering out information that contradicts the expected outcome. It would be inappropriate to look at these findings as an anomaly to untrained or unintelligent examiners, because it is not a by-product of training or intelligence but the way the brain is designed.

In fidelity testing confirmation bias is most important from the perspective of the partner of the examinee. If someone strongly suspects their partner has been unfaithful, the result of a passed polygraph is unlikely to change their pre-existing bias. Instead they will challenge the accuracy of the polygraph or be convinced the examinee cheated on the test (just like they cheated on them). The examinee wants to “prove” innocence, but the end result is
not the building of trust and connection (as desired by the examinee) but an expensive new fight around the already pre-established preexisting beliefs.

Liability

- 1 in 4 women (24.3%) and 1 in 7 men (13.8%) aged 18 and older in the United States have been the victim of severe physical violence by an intimate partner in their lifetime.
- Nearly 20 people per minute are physically abused by an intimate partner in the United States.
- In 15 states, more than 40% of all homicides of women involved intimate partner violence.
- 28% of families were homeless because of domestic violence.
- Approximately 5 million children are exposed to domestic violence every year. Children exposed are more likely to attempt suicide, abuse drugs and alcohol, run away from home, engage in teenage prostitution, and commit sexual assault crimes.
- Only 1 out of 3 people who are injured during a domestic violence incident will ever receive medical care for their injuries.
- Most cases of domestic violence are never reported to police.

(Statistics: SocialSolutions.com)

As you can see from these statistics Intimate Partner Violence (IPV) is a very significant problem in the United States. Often time IPV is connected to the perceived or actual infidelity of a partner. It is worth considering the information that is collected in a polygraph and with whom and how this information is shared.

If polygraph is for “the protection of the innocent,” as previously mentioned, then it may be worth thinking about the ripple effects of our exams and their reports. My personal bias is that it is best contained within the triad of treatment. I would have a really hard time if I were to perform a test only to watch the evening news and see the report of a homicide involving my examinee. That may sound a bit melodramatic, yet the statistics show that in many states 40% of the homicide rate is related to IPV. The liability of uncontained polygraph examinations could have serious, unintended, ramifications.

Efficiency

Time is a precious commodity. Pre-exam preparation is an important part of the polygraph process. When working with attorney’s I want access to police interviews with alleged victims and an understanding of case facts from multiple perspectives. When I am doing pre-employment exams I want to review the background packet prepared by the background investigators. In PCSOT testing I will always touch bases with the therapist and the probation/parole officer.

Working fidelity testing I learned quickly that there is a pre-exam preparation that often includes explaining the process and educating the 1) examinee, 2) examinee’s
partner, and 3) the therapist. The phone calls for these tests have a tendency to be more frequent and more time consuming, in part because of the emotional intensity of the experience for the parties involved.

One of the worst possible outcomes of a fidelity test is following an exam (failed exams in particular) there is a long emotional processing session between the couple in the office. We are not trained to mediate such interactions nor is it time effective. If the post-test interview includes an emotional breakdown between an examinee and their partner, there is a ripple effect to the rest of your schedule and potential bleed over into the next examinee’s valuable time. I prefer to allow therapists to do their job at working through those dynamics. Thus I avoid wandering into a vipers nest, blinded by lack of information and background since my interaction is limited to the few hours of the test and some priming activities prior to the exam. Therapists often have a wealth of background information on the couple and the specific training for managing the relational fallout of disclosure.

An additional observation related to efficiency has to do with collecting a non-refundable deposit at the time an appointment is setup. One of the frustrations with fidelity clients is the tendency to cancel with very little notice or to “No Show”. Both create problems for maintaining a schedule and effectively managing one’s time. It is worth collecting a portion of the overall fee in advance of the appointment to ensure you are not twiddling your thumbs for a few hours when they don’t show up. If they have financially invested in the test, they are much more likely to show up for the exam.

Conclusions

Fidelity testing is an interesting, under-utilized, form of polygraph testing. There is some nascent research in the field of “relational trauma” (couples therapy for infidelity) that is quite interesting. There is a therapist, Dr. Kevin Skinner, who developed an assessment tool that he uses with clients to understand the traumatic experience of infidelity for the partner of the cheater. His observation was that many of the clients he worked with exhibited manifestations of Post-Traumatic Stress Disorder (PTSD). After discussing his observations with other therapists that had similar experiences, he developed a screening tool he calls the Trauma Inventory for Partners of Sex Addiction (TIPSA) in early 2000. He wrote an article for Psychology Today and posted a link for the TIPSA. Since that time he has had more than 3,000 people complete the survey.

More recently Dr. Heidi Vogeler has taken the data from the TIPSA done some psychometric analysis of the tool. Her findings support the presence of trauma symptomology in the partners of those that have been unfaithful. In a subset of individuals the symptomology crosses the threshold to be diagnosed with full-blown PTSD. An analysis of the nature of
PTSD criterion is probably not necessary for the purposes of this discussion, but the take home point is “polygraph is for the protection of the innocent.” Included in this umbrella are people participating in therapy for relational dynamics. Infidelity is not a side-bar to be destained, but an area where polygraph can aid through its ability to foster honesty and accountability.

In order to navigate the waters of fidelity successfully I would encourage all of us to contemplate the ethical dilemmas and challenges that exist in that work. I do not have all the answers and I am not saying that examiners should not engage in private exams without the triad of therapy. That is what I have chosen for the reasons articulated, but it is not the only way to approach the issue. That stated in order to best serve our clients it is important to have open dialogue about how to maintain ethical and effective practices in this often derided and sidelined form of polygraph testing.
Practical Polygraph: Authorization and Release Form

Raymond Nelson

Upon entry into the examination room, following the initial greeting, introduction, and reasonable verification of the examinee’s identity, the onset of any polygraph occurs with the review and execution of the Authorization and Release Form. The authorization and release process involves more than simply obtaining the examinee signature on a required form. When used correctly, the authorization and release process will serve to document that the examinee has been provided accurate information about the forthcoming examination. An example Authorization and Release Form is shown as Appendix A. The Authorization and Release Form should start by capturing the following information:

- Name or identity of the examinee
- Examinee date of birth and age
- Examinee residence or mailing address
- Examinee phone contact information or e-mail
- Date of the examination
- Start time of examination (time of execution of the Authorization and Release Form)
- Examiner name
- Exam location

Some examinees can be requested to complete the header/ID section of the Authorization and Release Form upon entering the examination room. It is also possible to provide the examinee with the Authorization and Release Form prior to entering

1 Raymond Nelson is a psychotherapist and polygraph examiner who has conducted numerous polygraph examinations in private practice, and has testified as an expert in both polygraph and psychotherapy matters in a variety of U.S. courts. Mr. Nelson is a Past-President of the American Polygraph Association (APA) and is currently serving as an elected member of the Board of Directors. Mr. Nelson has published numerous articles are all aspects of the polygraph practice including field practices, analytics, and technologies. Mr. Nelson is research specialist with Lafayette Instrument Company (LIC), where his work involves the development, validation and marketing of polygraph instrumentation and methodologies. There are no proprietary interests associated with the information in this manuscript, and the information provided herein are the views and opinions of the author and not necessarily those of LIC or the APA.
the examination room. It may also be acceptable to provide a copy of the *Authorization and Release Form* to the examinee in advance of the scheduled examination.

Although documentation of information is a primary objective when completing this form, there are other secondary benefits that can also be achieved in the authorization and release process. For example: examinees with literacy problems, persons with serious intellectual disability or psychiatric disorganization, and others that may have difficulty completing the form without substantial assistance may be more easily identified as requiring assistance and careful consideration. The authorization process can help to identify those who are either unsuitable or marginally suitable for polygraph testing, depending on the degree of disability. Also, persons with medical or mental health problems will have an opportunity to provide information and request information about the effects that these may have on the polygraph examination.

In addition to the identification and header section, the *Authorization and Release Form* should document that correct information has been provided to the examinee about how the examination is to be conducted and the examinee’s rights during testing. Following is a suggested list of information content items that can be provided to the examinee during the completion of the *Authorization and Release Form*:

1. A statement of willing agreement to complete the examination, along with a statement of understanding that the examination may be terminated at any time.

   This statement pertains only to agreement regarding the completion of the referral for examination and does not attempt to engage in complex legal discussion about voluntariness, and so avoids discussion about duress. Examinees should not be subject to polygraph testing if they express their choice not to be tested. Provision of information that the examination can be terminated at any time will serve to document that the examinee is fully aware that completing the polygraph examination is a personal choice. Also, of course, the examination should be terminated and the examinee should not be detained at any time an examinee has expressed a desire to stop or leave. Of course, law-enforcement examiners who conduct custodial examinations will have other requirements for advisement pertaining to the rights of persons who are being detained.

2. An acknowledgment that the examination will be conducted without any promises or prior agreement about the outcome or test result.

   This statement should clearly explain that the examiner will evaluate the information and test results and render an opinion about deception or truth-telling following the completion of the examination.

3. A statement attesting to the examinee’s adequate physical and mental health at the
Examinees should not be tested if they are unsuitable for polygraph testing due to physical or mental health reasons. Examiners may need to exercise some discretion and judgement when evaluating the suitability for polygraph testing of persons with chronic or ongoing mental or physical health problems. A good practice is to notate, on the Authorization and Release Form and in the examination report, all information, statements, questions and details that an examinee may express about his or her mental or physical health issues regardless of whether they affect the examination. All examiners must be cognizant of the legal context in which they work, and should forgo the review and discussion of this information when they are prohibited from doing so.

4. A statement acknowledging the examination will consist of both interview/discussion and test data recording phases, and that the instrumentation and physiological recording sensors will be explained in satisfactory detail prior to their placement or attachment and prior to commencing any recording of physiological activity.

Examinees should be informed, prior to the execution of the Authorization and Release Form, that the examination consists of both interview/discussion and test data recording phases. This information should include an explanation of the location and attachment of each physiological recording sensor. Examiners should convey that all sensors are non-invasive, are placed externally, and are not harmful to the examinee. Sensors that may cause some minimal discomfort (e.g., cardio) can be discussed factually at this time. More detailed information can be provided to the satisfaction of the examinee or in response to questions or inquiry. It is important that examinees are provided accurate and satisfactory information about the examination proceedings and instrumentation prior to prior to the commencing the interview/discussion and test data recording phases and prior to the execution of the Authorization and Release Form.

5. A statement acknowledging that all test questions will be reviewed prior to the recording of any physiological responses, and that the examinee will be advised of the onset and completion of all physiological recordings.

This statement should also clarify that the examinee will have an opportunity to clarify any information prior to the recording of any physiological responses to the test stimulus questions.

6. A statement acknowledging that the examination data may be reviewed anonymously for quality assurance and professional development – not involving experimental activities that will have any effect on the examination outcome or reason for referral for testing.

Examinees should not be subject to experimental processes without their informed consent, and should be assured of their
privacy confidentiality – including when professionals engage in required quality assurance and professional development activities.

7. A statement indicating that the examination will be audio/video recorded including the interview and recording phases.

Examinees should be advised that the audio/video recording are subject to the same requirements and restrictions as all other data and information from the examination.

8. A statement that names or identifies those professional persons or agencies who are authorized to receive the information and results from the examination.

Examinees should be advised that all information and examination results will be provided to the referring professionals. Examinees should also be advised that information and results will not be released to persons not named on the Authorization and Release Form or other professionals except as required by law.

9. A statement indicating whether the examination and results are (or are not) privileged and confidential (i.e., attorney work product).

Examinations conducted under referral from an attorney may be considered attorney work product and may therefore be privileged and confidential. All examinations not referred by an attorney are subject to normal legal requirements for professional confidentiality and disclosure of information.

10. A statement indicating whether recipients of information from the examination are (or are not) legally mandated reporters in cases of known or suspected abuse of a child or other vulnerable persons.

Many referring professionals are legally mandated to report all known or suspected abuse of children or vulnerable persons to proper authorities (attorneys and private investigators may be an exception to this). Polygraph examiners are sometimes not legally mandated reporters themselves, though this may vary for each jurisdiction. All examiners should be cognizant of their local laws and regulatory requirements.

11. A statement indicating the date of expiration of the authorization for release of information to the named professionals or agencies.

Examinees should be advised of the date of expiration of the Authorization and Release Form, after which information will not be released without further authorization.

12. A statement releasing the polygraph examiner and all professional affiliates from harm, liability and damages related to the completion of the examination.

This language can become legalistic sounding, and examiners should be prepared to briefly and clearly explain this
statement if necessary. Minimally, it should be clearly explained to the examinee that execution of the Authorization and Release Form, and completion of the examination, requires that examiners remain objective and unencumbered by any other liabilities and concerns.

A useful practice is to define all locations on the Authorization and Release Form where the examinee can be requested to initial each of the information content items. Thorough procedures will involve assisting the examinee in reviewing each content item. This should include reading or paraphrasing the item verbally for the examinee, and inviting questions or verbal confirmation of understanding. Each content item should be reviewed and initialed before proceeding to the next item. Initialing each item does not constitute the examinees assent or the execution of the Authorization and Release Form, and signifies only that the content items was read, reviewed and explained to the examinee’s satisfaction and understanding. In this way, examinees will be less likely to execute the Authorization and Release Form without actually reading and comprehending its content. Professionals who neglect or shortcut this process may be at risk for adverse experience if an examinee can successfully argue he or she has signed an authorization form for which the content was not correctly understood.

Many polygraph examinees lack accurate information about the polygraph test, and some may approach the examination with misinformation. Even more important than the Authorization and Release Form itself is the authorization and release process. Use of a well-developed Authorization and Release Form can help to ensure an effective process in which each polygraph examinee has been provided accurate and complete information. This information should include the instrumentation, recording sensors, examination procedures, use of audio/video recording, and the referral context under which the examination will be completed. The authorization and release process should indicate to whom the examination information and results will be made available.

Execution of the Authorization and Release Form requires the examinee’s signature – or the examinee’s recorded verbal confirmation if the authorization is done via audio/video recording. It may be good practice to audio/video record the entire authorization and release process even when completed in written form. The executed form Authorization and Release Form may also include a location for a witness signature for a parent or guardian when testing minors. The examiner may witness the execution of the form if no others are present – which is most often the case, as polygraph examinations must be completed in a manner that is free of distractions. The examination – including substantive discussion of the matter under investigation, discussion of test questions or any physiological recordings – should not and
cannot occur until after the execution of the Authorization and Release Form.

The Authorization and Release Form can be completed via paper documentation or via electronic document form. It is also possible to complete the process verbally with the details documented via audio/video recording. Regardless of how the process is completed and recorded, use of a well-developed Authorization and Release Form can help to expedite the authorization and release process and may help to avert potential problems that can result from misunderstanding or incomplete information during the onset of a polygraph examination.

Following the completion of the examination and post test review, the Authorization and Release Form can be used to formalize and document the completion of the examination. A good practice, when used in this manner, is to have the examinee write the time of completion on the Authorization and Release Form. The completed form should include a statement reaffirming that the examination was completed without promise of reward or outcome, that all test questions were reviewed and understood and the that examinee was aware that the examination could be terminated at any time. The examinee should be requested to initial this reaffirmation upon reading it. It is good practice is to always read or paraphrase the information for the examinee, prior to requesting the examinee initial the post test information and reaffirmation. The examinee can be directed to exit the examination room and the audio/video recording should be stopped following the signature and execution of the post test section of the Authorization and Release Form.

Effective use of the Authorization and Release Form can help to expedite the examination process and may help to avoid potential problems that can result from misunderstanding or incomplete documentation. A well-developed Authorization and Release Form will served to document that examinees have been correctly informed about the conduct of a competent and professional polygraph examination. Information should correctly describe the testing process, (i.e., what will be done during testing – including the placement or attachment of the recording sensors) and how the process may affect the examinee during the examination. Information should also indicate who will receive information from the examination. It is important that the information provided to the examinee is factual and correct. When it is done with skill and expertise, the authorization and release process may also help to establish an effective rapport – wherein detailed information can be discussed in a context of dignity and respect despite the asymmetrical roles of examiner and examinee.
POLYGRAPH AUTHORIZATION AND RELEASE FORM

Name: ___________________________ Date: ___________________________ Time: ___________________________

My Address is: ___________________________ ___________________________
City: ___________________________ State: ___________________________ Zip/Postal Code: ___________________________

Daytime Phone: ___________________________ Evening Phone: ___________________________

Driver’s License / State ID: ___________________________ Date of Birth: ___________________________ Age: ___________________________

Polygraph Examiner: ___________________________
Exam Location: ___________________________

1. ____ I do hereby authorize the above named professional, who is a qualified polygraph examiner, to administer a polygraph examination to me on the date indicated above. I understand that I may cancel the examination process at any time. I further understand that I will not be detained to complete the examination or interview if I wish to stop.

2. ____ I am agreeing to take this examination, without any promise of reward, including promises of favorable test outcomes. I understand that the expert opinion of the examiner will be based upon the polygraph test data as to whether I have been truthful or deceptive during the examination.

3. ____ I am in adequate (stable) physical and mental health to complete this examination.

4. ____ I understand that the examination equipment and physiological principles will be explained to my satisfaction before beginning the examination. I further understand that the examination will consist of both interview/discussion and test data recording phases, during which test questions may be repeated multiple times.

5. ____ I understand that all test questions will be read and reviewed with me before beginning the examination. I further understand that I will have an opportunity to ask for clarification before recording my physiological responses to the test questions. I understand that I will be advised when the recording of my physiological responses has begun and ended.

6. ____ I understand that information from this examination may be reviewed or in anonymous or aggregated form by other professionals for purposes of quality assurance and professional development. I further understand that this does not involve experimental activities that may affect the outcome of this exam or the reason for referral for this examination.

7. ____ Examination Recording (circle): Audio YES NO Video YES NO

8. ____ I authorize the release of the results and information from this examination, both verbally, in writing, and electronically. I further understand that the information can include the examination content, video/audio taped interviews, and examination results, in addition to a written summary report. Information will be released to:

9. ____ Information from this examination ARE / ARE NOT (circle) privileged and confidential attorney work product.

10. ____ Recipients of this information ARE / ARE NOT (circle) mandated to report known or suspected cases of child abuse or abuse of other vulnerable persons.

11. ____ This authorization for release of the above listed information expires (365 days maximum): _____________

12. ____ I myself, including my family members, heirs, and executors, hereby release and forever discharge from all harm, liability, or damage whatsoever, the above named examiner, including any named or an-named associates and affiliates, including any officers, agents, employees, employers, and associates from all suits, actions of law or claims resulting from this examination.

Signature of Examinee: ___________________________ Date: ___________________________ Witnessed: ___________________________

The portion below is to be completed at the end of the examination.

This examination was concluded at ___________. In signing this portion I completely reaffirm in its entirety my above agreement that I understood the test questions and completed the examination of my own accord, without promises of reward or particular test outcome, knowing that I could stop at any time or consult with an attorney or any other person.

Signature of Examinee: ___________________________ Date: ___________________________ Witnessed: ___________________________

Evidence and Common Sense: Suggestions for Scoring Electrodermal Responses

Donald J. Krapohl 1
Karen Nix 2

"Begin challenging your assumptions. Your assumptions are the windows on the world. Scrub them off every once in a while or the light won’t come in."
- Alan Alda -

Introduction

Depending on where and when you went to polygraph school you may have learned to evaluate electrodermal responses (EDRs) differently from others in the profession. Polygraph scoring is more standardized today than it used to be. If you went to training back when we called the electrodermal activity (EDA) “galvo” or “GSR”, you probably noticed that it has now changed.

We no longer recognize the “trend of the gross curve”, the “Devil’s Finger” or the “finger of death”. There is no more 5-second offsets or turning the settings way down because the “GSR” is too sensitive. Today we know that the EDA contributes about half of the diagnostic information in the charts and that EDR amplitude accounts for almost all of that. We know that EDR amplitude is the primary feature and duration is an albeit-weak secondary feature. After that, the way EDA is interpreted has varied according to schools of thought, schools of instruction and personal experience.

In this article we address subtler aspects

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of EDR scoring and some of the boundary areas that are still taught differently among the polygraph schools. We include citations that will allow you to evaluate the same evidence we reviewed in producing this article to help you decide whether your scoring practices align with the research. We propose experiments, both thought and real, so you can test our ideas. Finally, we give recommendations for consideration provided by schools and field examiners. The recommendations outlined in this article should be taken as such, “recommendations” and we offer these four caveats:

- The recommendations are our opinions, based on an interpretation of the available evidence.
- The recommendations are founded on current understandings, which may be updated as more scientific evidence becomes available.
- The recommendations do not necessarily represent the views of our agencies and employers, past or present.
- The recommendations are not intended to represent the position of the APA.

Let us begin with the fundamentals.

**Section 1. The Fundamentals**

**What is EDA?** EDA is merely a measure of the electrical properties of the skin. EDA is typically recorded in one of three different ways. One is skin conductance (SC), which as the name suggests, is how easily electrical current passes through the skin. The reciprocal measure is called skin resistance (SR), and it is the second way EDA is recorded. A third approach is called skin potential (SP). In SP the skin creates the current itself, in contrast to the other two methods in which an external current source is introduced to the skin. SP is not normally used in polygraph testing and will not be addressed here.

Two forms of EDRs are tonic and phasic. In polygraphy we are most interested in phasic responses because those are what we score. Phasic responses, in comparison to tonic responses, are those which change relatively quickly. Picture in your mind an EDR at a test question and you are seeing a phasic response. Tonic activity represents the flat or slowly drifting behavior of the tracing over the course of a test. Tonic changes might be useful in Peak of Tension tests, where the patterns of interest are overall shifts in the tracing over the course of the tests. Tonic information may include baseline conductivity or resistance levels, rate of change over time, and the incidences of spontaneous

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or non-specific skin conductance responses (NS-SCR). Tonic activity is not used for scoring in any of the validated testing techniques and is, in a manner of speaking, merely the background on which phasic responses appear.

SC and SR are mathematically related. That does not mean they carry the exact same information. SC maintains a linear relationship with the number of eccrine glands recruited in a phasic response whereas SR does not. In other words, SC provides a more direct measure of what is happening on the surface of the skin. This is one reason psychophysiologyists recommend SC for recording EDA. Polygraph-wise there is no meaningful differences between scores assigned using SC or SR (Barland, Honts & Barger, 1990; Kircher, Packard, Bell & Bernhard, 2001). However, SC recordings are more stable and require fewer adjustments during testing (Barland, Honts & Barger, 1990). The importance of this feature will be more apparent as we take up the issue of EDA filters.

EDA Filters

All polygraphs filter the EDA data. Filtering is necessary to remove noise that is unrelated to EDA. Polygraph manufacturers also include options for filtering tonic activity to help keep the EDA tracing centered. For purposes of this discussion we will refer to the centering filter as being the automatic mode, and the filter that does not remove tonic information as the manual mode. We recognize that manufacturers may use other names for these filters.

Both the automatic and manual EDA modes have their own advantages. For convenience, the automatic mode has much to commend it. There are no or few requirements to recenter the tracing during testing. The manual mode, in comparison, can drift, sometimes dramatically over the four or five minutes of a test.

The manual mode filter, on the other hand, is less imposing on the raw data, giving it one big advantage over the automatic mode. The automatic mode can show changes to the EDA tracing that are unrelated to a bodily response. Figure 1 is an example of EDA displayed in both manual mode (top) and automatic mode (bottom). While the automatic mode suggests an EDR may have begun before the test question was presented, the manual mode shows that the response started about two seconds after question onset, the true response onset point. If the scorer only viewed the data in the automatic mode, the rise before question onset would have been misattributed to the examinee rather than the filter.
SPECIAL FEATURES

The automatic filter tends to act more strongly on slower phasic responses than those that are faster because there is more time for the filter to have an influence. As a result, in exceptional cases the scores might be reversed if the rise speed of two EDRs are substantially different, depending upon which EDA mode the examiner chose to score.

Figure 2 shows an EDA signal displayed in both the automatic mode (top) and manual mode (bottom) along with the phasic amplitudes, in chart divisions, for the relevant and comparison questions. The gain settings are identical for both the automatic data and the manual data. In the automatic mode the larger EDR was at the comparison question. In the manual mode the relevant question had the larger of the two EDRs. Because scores are assigned based on the relative magnitudes of EDRs between relevant and comparison questions, a potential reversal of scores might take place in this example. Our experience has been that these types of anomalies are uncommon, but they do occur. Our informal sense is that it happens once in about one out of eight cases. Examiners who do not have, or do not avail themselves of a manual mode remain blind to the potential scoring differences that can arise from the automatic mode.

Figure 1. An EDR displayed in manual mode (top) and automatic mode (bottom) showing how response onsets may appear differently between the two modes.

Figure 2. EDA displayed in automatic mode (top) and manual mode (bottom) where relative amplitudes of EDRs to a comparison question and relevant ques-
tion have been reversed. Gain settings were the same for both EDA modes.

**Recommendation 1:** Whenever practical, examiners should score the polygraph data using the manual mode. To minimize the need to re-center the data, skin conductance should be recorded rather than skin resistance.

**Section 2: Assessing Response Onset**

**Myth of the 0.5-second onset latency**

Most of us learned in polygraph school or from seminar lecturers that the fastest an examinee can generate an electrodermal response is about a half of a second. If we see a response on the polygraph that begins sooner than 0.5 seconds from question onset, we know it could not have been caused by the test question. From this we all believed we could score any EDR that began after 0.5 seconds from question onset. That belief is probably untrue, and we’ll show you why.

Let’s do a little experiment. Mark this page, go get your polygraph instrument and then come back. We’ll wait for you.

Now, activate the polygraph software and place the EDA sensors on one hand. All you will need for this experiment is the EDA sensors. Relax for a few moments to let the tracings stabilize. Move your other hand to your ear but don’t touch it. Let the tracing stabilize, again. Now, touch your ear and watch the screen for the EDR to happen. How long did it take for you to show an EDR from touching your own ear? Was it a half-second? Almost certainly, it did not happen that quickly. For most people, it occurs within 1-3 seconds. And that was for a very simple stimulus that you knew was coming. Whatever the latency was in this little experiment, it was probably the shortest you can manage.

Set your polygraph aside for now (you’ll need it again shortly), and let’s talk about what this experiment tells us. Imagine for a moment what the examinee is experiencing when we read him or her a question during a polygraph test. When we present a test question to an examinee we read at about 2-3 words per second. It takes an examinee perhaps 2-4 words to know what the question is. So, the examinee typically doesn’t recognize the test question until about 1-2 second from when we start to ask it. Then it takes processing time to produce an EDR. Now we’re out maybe another second. So, it would be the exceptional examinee that could produce an EDR to a polygraph test question in under 2 seconds.

Now, back to your polygraph instrument, bring up any case in your archive that has decent electrodermal data. Make sure your EDA mode is in the manual mode. What do you see for latencies? You are most likely seeing EDRs that begin 2-6 seconds after question onset. Bring up more cases. Same kind of latencies, right? To
our point, how often do you see scorable EDRs with 0.5 second latencies?

Psychophysiologicalists recommend a minimum of 1 second of latency to judge whether an EDR is associated with a stimulus. Latencies may be shorter in their experimental settings because it assumes a couple of things that may not apply to us. Consider that psychophysiological experiments typically use uncomplicated stimuli, such as auditory tones or light flashes instead of the multi-word test questions we use. Recognition of their simple stimuli is almost instantaneous. Researchers also tend to recruit young, healthy, and motivated college students for their studies. Both the type of examinee and the stimuli work to minimize latencies. Dawson, Schell, & Filion (2007) explains:

Based on frequency distributions of response latencies to simple stimuli, it is common to use a 1–3 s or 1–4 s latency window. Hence, any SCR (skin conductance response) that begins between 1 and 3, or between 1 and 4 s, following stimulus onset is considered to be elicited by that stimulus. (p. 164)

It is reasonable to conclude from their recommendations, the ear-touching test you conducted on yourself, and your archive of polygraph cases that an EDR latency of 0.5 seconds is too short. We suggest that EDR latencies shorter than 2 seconds are not the norm in polygraph testing.

Recommendation 2: For the Comparison Question Technique, polygraph examiners should be careful about scoring EDRs with latencies shorter than 2 seconds.

While we are on the topic of latencies, this is a good time to bring up something you probably already noticed. Examinees are pretty consistent about their latencies. In fact, intra-individual consistency in physiological responding is the norm (Grings & Dawson, 1978). If your examinee has a latency of about 3 seconds to any question, he is probably showing about a 3-second latency for virtually all questions. Their reaction is generally timed to when they recognize the test question which, for most examinees, is somewhere in the area of the first 2 – 4 words. When you don’t see consistency it could signal a problem, and it may be an indicator of countermeasures if there are uncharacteristically long latencies exclusively on comparison questions. There is not a lot of within-examinee variation in EDR latencies unless something unusual has taken place.

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4 This follows the recommendations of the Society for Psychophysiological Research.
But how consistent is consistent, though? What if an EDR begins one second later than the latency of the remaining EDRs, or two seconds, or 5 seconds? There is no clear answer to that question, and each case should be assessed upon the totality of the evidence. What we do suggest, though, is that EDR response onset windows (or ROWs in examiner-speak) that are anchored to question onset or question offset or examinee answer instead of the examinee’s normal latency may not be sensitive to aberrant within-examinee latencies that could be important. Statistical averages on which ROWs are often based (if we assume such research was ever conducted) are fine, but limited. We suggest instead that attention to individual stereotypy in EDR scoring, indeed for all data channels, provides more information.

**Recommendation 3:** Polygraph examiners should try to determine the examinee’s normal EDR latency and score cautiously those EDRs that are substantially different from the examinee’s norm.

So, what have we learned so far in this section? First, EDR latencies under 2 seconds should be scored conservatively, and second, examinees are pretty consistent in their EDR latencies. Now, let’s apply this new learning. In Figure 3 we show how consistency and minimum latencies can come into play.

Figure 3 is an image captured from OSS-3 software. The software has identified the start and stop points for where it measures the amplitude of EDRs (black lines). Note that for this examinee, the latency of his EDRs are fairly consistent, about 2.5 seconds, with the exception of 5R. At 5R the software starts a measurement about 0.5 seconds after question onset just as most of us have been taught. If our new learning is to be applied to this problem, what should we as human scorers do?

*Figure 3. Chart segment showing EDRs for relevant and comparison questions.*
Let’s turn our attention now to inflection points.

**Inflection Points**

Inflection points are extremely important and using them properly allows more effective exploitation of EDR data. This is especially true when the EDA tracing is not in “homeostasis.” Take a look at Figure 4. Notice that there are inflection points for all five of the displayed questions at about four seconds after question onset. However, at both R4 and C5 the examinee has shown a small reaction a few seconds before the question and the tracing is dropping at about question onset for both questions. Conventional training in some schools teach that the EDRs at R4 and C5 cannot be used for scoring because the questions were asked when the examinee was not in “homeostasis.” We would argue that the data for each is still scorable because the examinee has reacted to the test question just at the time he is supposed to. The fact the tracing is dropping at question onset is inconsequential. Actually, the tracing never flattens at any point in the chart in this example. The inflection points tell us that the reactions are timely at R4 and C5 and to disqualify the reactions because of the “homeostasis” rule is arbitrary, not necessary.

Schools of thought may differ whether to score 5R, but for those who insist on scoring this reaction, the right onset point is not where the software would begin the measurement. It is at the inflection point indicated at the black arrow. It was at this moment this examinee typically began to respond to the content of the test question. Think stereotypy.

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5 We have placed quotation marks around the word “homeostasis” because this is the term we most often hear in polygraph training, and it is not the correct term. EDA is always in homeostasis, even when there is a reaction. What instructors may be trying to communicate with the word “homeostasis” is that the tracing is flat or stable, not going up or down. Sometimes the EDA is drifting, sometimes it is in reaction, other times coming off a reaction. And for some of these conditions the data may still be scorable. “Homeostasis” before question onset, per se, is not a requirement.
rooted in logic or evidence, and wasteful of diagnostic information.

A caveat to this approach could be when an examinee has started a spontaneous EDR and the tracing is still sharply rising when a timely EDR begins. When this happens it can be guesswork how much of the spontaneous EDR is overlaying the timely EDR.

**Recommendation 4:** Polygraph examiners may still be able to score reactions even when the EDA is not in pure “homeostasis” by using the examinee’s typical inflection point as the starting point of an EDR, so long as the examinee is not already significantly reacting.

![Figure 4. EDR inflection points with and without “homeostasis.”](image)

**Ratios**

In the original Backster scoring system the minimum difference in EDR amplitude between a relevant and comparison question had to be 2:1. If the ratio between the larger and smaller EDR amplitude was smaller than 2:1 the EDA score had to be 0. Some years later the US government began to teach the Bigger-is-Better Rule (BIBR). In this modification of the Backster system, if the EDR of one question was discernibly larger than the EDR against which it is to be compared, the examiner could assign a value of plus or minus, depending on which EDR was larger. However, what constitutes “discernibly larger” was not quantified. How small a difference would be permitted under this rule? Could it be less than a chart division, the tracing’s line width, a single pixel different? That question has no formal answer as nearly as we could find. Moreover, discernibility may depend upon the
gain settings. Which brings us to a point about gain settings and a related matter of proportionality.

Figure 5 shows three EDA tracings. They are the same data, but with different gain settings. The top tracing has a very low setting, the middle a higher setting, and the bottom shows the data in the highest setting. At the lowest setting some scorers may argue that the EDRs between C7 and R4 are too close in size and therefore warrant a score of 0. The difference in EDRs is fairly obvious as the gain settings are increased as they were in the bottom two tracings. This highlights the need to ensure the gain settings are adequate. The gains must be set to where real differences in amplitudes can easily be seen.

A second point we’d like to make regards proportionality. When gain settings are changed, the amplitudes of the EDRs are affected. What does not change though, are the amplitudes relative to one another. That is, if the ratio of responses is 2:1 at one gain setting, just as they are in the middle tracing in Figure 5, so too will be the ratio at a higher setting, as it is in the bottom tracing in the same figure. So, changing gain settings may affect discernibility of differences in EDRs but not the ratio of the response amplitudes. Let us turn our attention now to EDR ratios, and whether bigger is always better.

**How much “Bigger is Better?”**

The use of ratios created by the relative amplitudes of EDRs to relevant and comparison questions has been around for a long time, and is well socialized in the profession. Work to find optimal EDR ratios for the 7-position scoring system arose during the development of the Objective Scoring System (OSS; Krapohl & McManus, 1999), a manual scoring method ini-

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6 We know some quality control reviewers who require polygraph examiners to score the EDA at the gain setting in which the data were originally recorded. Examiners are prevented from changing the gain setting during scoring. We find this rule confusing as well as potentially wasteful of data. If the testing examiner did not anticipate the size of the examinee’s EDRs in advance, the gain settings may have been set too low. A rule that prevents the examiner from adjusting the gain after the test may lead to lost opportunities to score the data. By way of analogy, imagine a medical diagnostician examining a blood sample under a microscope, and being required to use only one level of magnification, the one she had selected first.
tially envisioned exclusively for polygraph cases submitted for evidence in court. Those ratios turned out to be unwieldy for manual scorers because they were difficult to memorize, and ratios were not symmetrical. That is, the optimal ratios depended upon whether the EDR to the relevant question was larger or smaller than the response to the comparison question. The onerous requirement to measure features, compute ratios, and map those ratios to manual scores was thought to be of value only in high-cost settings where the data would be examined by different polygraph experts, such as in court cases. Shortly thereafter polygraph manufacturers developed automated algorithms that simplified the OSS process. OSS as a manual scoring system was never employed outside of the laboratory.

We did not locate research on optimal ratios for two related approaches, 3-position scoring and the Empirical Scoring System (ESS; Nelson, Krapohl & Handler, 2008). Both use the BIBR wherein any observable difference in EDR amplitudes warrants the assignment of a score. Because what constitutes an observable difference has not been tested, we decided to do a little data mining to see if there could be an answer.

We recognized that differences in EDRs includes both signal and noise. The signal is when a larger reaction to a particular question corresponds well with ground truth. For example, larger EDRs at relevant questions of a deceptive examinee contain a lot of signal. Noise is the natural variability that accompanies all physiological responding. All signals contain some level of noise. Examiners know that sometimes liars have an EDR or two that are larger to the comparison questions than the EDRs to the relevant questions. This is variability. It is only in the long run that the EDRs to the relevant questions have the predicted effect. Where this comes into play with the BIBR is that very small differences between two EDR sizes might contain more noise than would larger differences in EDR amplitudes. Conversely, a requirement to use very large differences between two EDR amplitudes before assigning a score imposes a risk that the availability of signal at smaller differences is being wasted. To repeat, scoring very small differences in EDR amplitudes may have too much noise, but requiring large differences in EDA amplitudes may lose available signal. We believe there may be a “sweet spot,” a particular ratio of EDR amplitudes that performs best.

Using available data, we systematically varied the minimum difference in EDR amplitudes from >0% to >80% in 10% increments between relevant and comparison questions to assign 3-position scores, and then looked at how the various thresholds affected decision efficiency. The goal was to try to uncover any trend that might point to a recommended minimal difference in EDR amplitudes for manual ESS or 3-position scoring. The data sets came
from the development of OSS-2 (Krapohl, 2002), a yet-to-be published government laboratory screening project using the Air Force Modified General Question Test (AFMGQT), and confirmed AFMGQT criminal cases. To simulate You Phase examinations we converted the Federal Zone Comparison Test (ZCT) data from Krapohl (2002) by discarding the final relevant question. Because the 3-position scoring system and ESS are only different in that ESS doubles the EDR scores, the findings relate to both scoring methods.

Figure 6 shows what happened. To make this article more readable we will not delve into the intricacies of the statistical method here\(^7\), only to say that the higher the line on the graph the stronger the relationship between ground truth and the test scores. The trend in the single-issue tests (ZCT and You Phase) suggest that the lowest ratio (any difference greater than 0%) performs well, but not as well as does the ratios between 20% and 40%. Performance begins to drop off at about 40%. The trend in the graph suggests that the best contribution from the EDA would come by using a minimal difference between 20% and 40% for single-issue testing with ESS and 3-position scoring.

In general the two AFMGQT data sets point to a lower accuracy across virtually all ratios compared to the single-issue ZCT and You Phase datasets. This may be due to two contributing and related factors. First, the decision rules for the AFMGQT are based entirely on the scores of the individual questions unlike the single-issue exams that can use the examination’s total score. Second, each relevant question is posed only three times in three charts whereas single-issue exams have more presentations. As such the AFMGQT provides a less stable estimate of the examinee’s status as a truth teller or deceiver.

Similar to the single-issue examination data is that the AFMGQT data show that the very smallest ratio does not perform as well as many of the larger ratios. It is difficult to pick an optimal point shared by both AFMGQT data sets. The criminal set suggests a minimum ratio of 20% is acceptable whereas the screening set points to a minimum of 40%. The sample sizes for the screening AFMGQT (n=52) cases and the criminal AFMGQT (n=54) cases were not as large as those from the other sets (n=300), and so more variance might be expected with the AFMGQT sets.

A general conclusion from these data sets are that “bigger is better,” but ratios in the range of 20% to 40% are best for 3-position and ESS manual scoring. Our data suggest that scoring studies of ESS and 3-position scoring might have found modestly improved performance of those scoring systems if they had required a 20% - 40% minimum EDR amplitude difference to as-

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\(^7\) Those wanting to know more about how these numbers were calculated should contact the first author.
sign scores. Our findings do not apply to 7-position scoring, for which there are other ratios (Krapohl, 2002).

**Recommendation 5:** For ESS and 3-position scoring, minimum EDR ratios should be at least 20% to 40% to maximize the EDA’s value.

![Figure 6](image-url)

Figure 6. Point biserial correlation coefficients between ground truth and case-total EDR scores when minimum differences of EDR amplitudes between relevant and comparison questions are varied between >0% difference to >80% difference in 10% increments.
Breathing and Movement Artifacts

All polygraph examiners learn to annotate their polygraph charts to indicate deep breaths and movement artifacts. The purpose is to identify locations where the polygraph data may have been affected by these behaviors and that the physiological data has become suspect and not scorable. What degree of movement and deep breath (DB) is sufficient to warrant annotation and discarding of polygraph data is open to debate, often a lot of debate. We would like to offer a different perspective that might help resolve some of the disputes, at least regarding the EDA.

We must begin with a reminder of something we all learned in polygraph school. Rule #1: DBs and movements can cause distortions and reactions in the EDA, but they can’t stop a reaction. A deceptive examinee who moves his arm or takes a deep breath on relevant questions with an expectation that it will flatten his EDA can expect some disappointing news from his examiner.

Rule 2: Not all DBs and movements cause EDA distortions or reactions. Refer to Figure 7. The pneumograph shows a very large breath as the examinee answers the test question, but the EDA shows no reaction at all. Some departments and agencies would deem the EDA unscorable because of the DB. But refer back to Rule #1. The DB could not stop a reaction that would have taken place on Figure 7. There is no EDA reaction. The EDA was not affected by the DB. Ergo, the EDA is scorable.

Figure 7. Chart segment showing a deep breath with no effect on the EDA tracing.

Recommendation 6: The EDA can remain scorable even after a movement or DB if there is no evidence the movement or DB caused a reaction.

Let’s take this a step further. What if the

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8 We often hear examiners looking for an “official position” as to how big a DB has to be to mark it as a DB on the charts. This seems a backwards way of looking at the issue. It helps to remember the reason we mark DBs. Instead of looking for some one-size-fits-all DB threshold, look to see if the DB possibly caused or added to a reaction or distortion. If yes, mark the DB. If no, don’t mark the DB. DB size, per se, is not the deciding factor.
DB or movement might have induced an EDR? Do we always need to discard the EDA data in such cases? Refer to Figure 8 and note the DB at the question on the right. Also look at the EDR on the left in which there was no DB. In this case the EDR on the left (no DB) is greater than the EDR on the right (with a DB). If DBs can enhance a reaction, but can’t stop one, what can we conclude? It is that the question on the left is more bothersome to the examinee than is the question on the right. For this reason, it may be possible to score the EDR even though part of it may be attributable to the DB.

**Recommendation 7.** If one EDR is smaller than a second EDR against which it is being compared, even when there is a DB or movement that might have boosted the first EDR, it may still be scored against a second EDR that was not affected by any DBs or movements.

If the DB may have caused an EDR that is larger than the one against which it is to be compared, the EDR is not scorable.

**General Observation**

Not all instrument manufacturers filter their automatic mode the same way. All we can say is that, regardless of the instrument, the automatic mode affects the raw information from the skin more so than does the manual mode. We see no harm in recording charts in the automatic mode to lessen the attention burden on the examiner during testing. However, it is incumbent upon examiners to refer to the manual mode to determine whether the automatic mode has altered the data in ways that would influence the scores. Knowing as we do that the automatic mode affects the amplitude of slower responses more than it affects faster responses, and that response onsets can be interpreted differently depending upon the EDA mode, we would argue that when all things are considered and the manual mode scores are different from automatic mode scores, the manual mode wins.

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**Figure 8.** A DB that may have contributed to an EDR (right), albeit smaller than the EDR against which it is being evaluated (left).
Summary

In this article we have offered seven recommendations that will help examiners maximize the value of their EDA data. The recommendations are:

1. Whenever practical, examiners should score the polygraph data using the manual mode. To minimize the need to recenter the data, skin conductance should be recorded rather than skin resistance.

2. For the Comparison Question Technique, polygraph examiners should be careful about scoring EDRs with latencies shorter than 2 seconds.

3. Polygraph examiners should try to determine the examinee’s normal EDR latency and score cautiously those EDRs that are substantially different from the examinee’s norm.

4. Polygraph examiners may still be able to score reactions even when the EDA is not in pure “homeostasis” by using the examinee’s typical inflection point as the starting point of an EDR, so long as the examinee is not already significantly reacting.

5. For ESS and 3-position scoring, minimum EDR ratios should be at least 20% to 40% to maximize the EDA’s value.

6. The EDA can remain scorable even after a movement or DB if there is no evidence the movement or DB caused a reaction.

7. If one EDR is smaller than a second EDR against which it is being compared, even when there is a DB or movement that might have boosted the first EDR, it may still be scored against a second EDR that was not affected by any DBs or movements. If the DB may have caused an EDR that is larger than the one against which it is to be compared, the EDR is not scorable.

These recommendations are rooted in evidence or common sense, sometimes both. We encourage examiners to test for themselves whether they provide value to their chart data analysis and polygraph examinations.

References


