National District Attorneys Association

The Prosecutor

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• IN THIS ISSUE •

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The Prosecutor

A Publication of the National District Attorneys Association

About the Cover
Built in 1908, then expanded in 1924 and again in 2005, the Summit County Ohio Courthouse stands proud as the Guardian of Justice. It was placed on the National Register of Historic Places in 1974.

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Graph Theory for Prosecutors

By **PAUL CRICKARD**
Chief Information Officer, 2nd Judicial District Attorney's Office, Albuquerque (NM)

Elvis Presley was in *Viva Las Vegas* with Cesare Danova, who was in *Animal House* with Kevin Bacon. This means that Elvis has a Bacon number of 2.[1] If this makes sense to you, you are probably familiar with the game Six Degrees of Kevin Bacon. If not, the game starts by naming an actor and trying to link them back to Kevin Bacon in as few connections as possible by using their co-star network. The game is based on graph theory, in particular the small world experiments by Stanley Milgram and later by Duncan Watts. These experiments attempted to prove that people were connected by a small number of connections.

What if you could see that your misdemeanor possession defendant had a connection to a defendant in a murder case and could possibly offer information?

Just as actors can be linked by movies, offenders can be linked by incidents. When two individuals commit a burglary, they have created a relationship. If we look at other individuals that have been involved with these two and add the relationships, we build a co-offender network. Co-offender networks can provide context to a single case. In a case management system, the connections between two offenders may be clear — they may be listed as co-defendants — but the relationships between them and other offenders in other cases is invisible. What if you could see that your misdemeanor possession defendant had a connection to a defendant in a murder case and could possibly offer information? Network graphs can make this possible. This article will provide an overview of graph networks and how they can, and are, used in criminal justice.

WHAT IS A GRAPH?

If you were not a math major, a graph was the plot of a function in algebra or calculus. You would use an x and y axis to plot a line for the equation of say y=2x+5 and that line would be the graph. A graph in the field of graph theory is comprised of a set of vertices (nodes in computer science) and edges. A set is a collection of objects with no duplicates. The set of vertices is a non-null set — otherwise the graph would be empty. The set of edges can be null, but is usually an unordered pair of vertices that are elements, or a subset, of the set of vertices. This means that each edge has to start and end at an existing node. This is often written as G=(V,E).

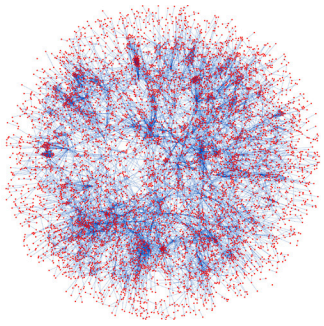
Networks can be undirected or directed and this is an important distinction. If Paul follows Yolanda on Twitter, that is a directional graph. In an undirected graph the reciprocal relationship is always true — Paul follows Yolanda and Yolanda follows Paul. Directed and undirected become important when traversing the graph. If you are trying to find the shortest path between nodes, you can walk along any edge in an undirected graph. In a directed graph, you must follow the direction of the connection — think about a one-way road.

CO-OFFENDER NETWORKS

Co-offender networks are common in criminal justice because crime is usually a multi-participant event and because the data is one of the easier to compile. To build a co-offender network, start by creating a node that is a single offender. Find every report that offender appears on.

[1] The Oracle of Bacon. Patrick Reynolds. 1999: https://oracleofbacon.org.

From those reports, create a node for every offender listed on the report, then connect them to the starting offender with an edge. This would be one hop. To take another hop, find all the reports of the co-offenders, and create nodes for every co-offender on those reports and an edge back to the starting co-offender. This is the equivalent depth of finding friends-of-friends. To use Facebook, this would be finding all of your friends and then finding all of their friends. As you start finding co-offenders of co-offenders, you will end up with a large graph. The graph in the image below is a real co-offender network spanning five years of reports for a single city.



A co-offender network from five years of police reports.

This graph is only three hops, or friends-of-friends-of-friends. At this depth, the graph is a cloud of nodes and edges, but you can see the small networks on the outer perimeter that have a single edge, and dense networks towards the middle of the graph. While patterns can be detected, the graph is too large to be analyzed without using graph theory and tools.

GRAPH ANALYTICS

To make sense of any non-trivial graph requires graph algorithms. For co-offender networks, the algorithms that will help in finding subgraphs of interest are centrality measures. There are several different centrality measures that can be used to find critical nodes. Each measure uses a different technique, and they are not interchangeable.

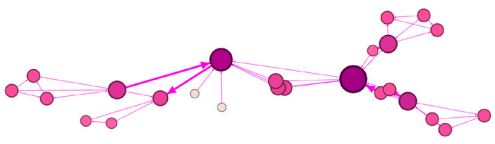
Degree centrality measures the importance of a node based on its degree. The degree of a node is the number of edges connected to the node. Degree centrality will allow you to find very connected individuals. On Twitter, Facebook, or Instagram, the highest degree centrality will belong to celebrities with their millions of followers.

Betweenness centrality measures the number of possible shortest paths that travel through the node. This number is calculated by finding the shortest paths between all nodes in the graph and taking the sum of times a path passes through the node divided by the total number of shortest paths. The number will be between zero and one. Betweenness centrality identifies nodes that have influence. If you always have to go through the same node to get anywhere in a graph, it is likely an important node. The edges between high betweenness nodes and others are bridges, which if severed, can disrupt a network.

Closeness centrality measures the importance of a node based on how close it is to every other node in the graph. From the starting node, sum the number of hops to get to every other node and that number is the closeness centrality measure. A person with a high closeness centrality would be someone who could communicate with and influence a network quickly.

PageRank is a measure developed by Google to score webpages but can be used in directed networks to score nodes. PageRank starts at a random node and calculates the probability that a person clicking links (traversing edges) will end up at a node. Nodes with the highest number of incoming edges will have a high PageRank. The assumption is that these nodes are the most important because everyone links back to them. In a graph of online retail, Amazon would likely have a very high PageRank as many pages would link to their products.

Using these centrality measures on the large co-offender graph, nodes with high scores were identified. Extracting all of the nodes connected to those high scoring nodes, the subgraph below was identified as a network of interest.

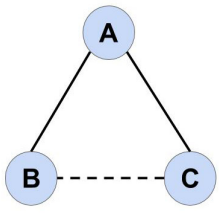


Using graph theory, a network of interest was extracted from the larger network.

This graph uses degree to scale the nodes, which makes the nodes with a high degree centrality stand out. The large purple nodes in the center and to the right have degree centralities of eight and nine respectively. Both of these nodes also have a high betweenness centrality. Removing these nodes would eliminate the bridge between the smaller co-offender networks on the left and right of the graph. When this data was found, it was verified against existing cases. As it turns out, both of these nodes have cases against them for violent crimes that were not part of the data used to generate the graph — they were new arrest incidents.

The two small white nodes in the center of the graph also standout. They have a degree of one and do not seem all that important in the graph. They may, however, turn out to be important in a criminal prosecution. One of these nodes could pick up a misdemeanor that would not have a high importance in a prosecutor's caseload. The case is viewed in isolation from the context of the larger network. When viewed as part of the network, this node could possibly provide crucial evidence in a case against the center node.

Centrality measures describe the current state of a graph. There are other algorithms that attempt to predict the creation of edges in a graph. You may have noticed that there are many triangle shaped relationships in the co-offender graph. Triangles are an important structure within graphs and help to predict where an edge, or relationship, may form. For a triangular graph with edges A, B and A, C, there is a high probability that an edge will form between B, C.[2] The result of the edge is the creation of a triangle which is called a triadic closure.



Predicting edge B, C based on triadic closure.

As a prosecutor working on a case involving A and B, and looking for witnesses or information about the case, knowing that C may know something about B could prove helpful.

HUMAN TRAFFICKING AS A NETWORK

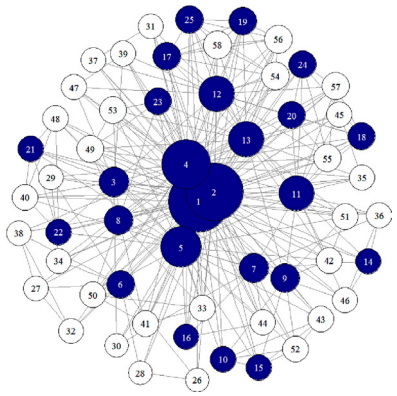
Human trafficking is a crime that involves networks of individuals and should be analyzed using graph theory. Paulo Campana conducting research on the human trafficking ring between Nigeria and Europe. The study found that offenders are often independent contractors and that there is a clear division of labor and specialization of tasks. Campana divides trafficking in to three distinct stages: recruitment; transportation; and exploitation. Using data from two indictments detailing the disappearance of 140 Nigerian women, Campana created a graph on the trafficking journeys that ended in Italy.

Human trafficking is a crime that involves networks of individuals and should be analyzed using graph theory.

The graph data set is two-mode. In graph theory, a two-mode graph is where the nodes are of two different types. In this case, the nodes were people and trafficking events. The result was 58 individuals (25 offenders and 33 victims) with 16 journeys, or events. Graph algorithms do not work the same on multi-modal graphs as they do on single mode. When nodes are of different types, it is comparing apples to oranges. Campana converted the two-mode graph into a single mode graph by creating a co-affiliation graph. Any people, nodes, that were connected to the same event were joined to each other and the event removed. This now allows for graph algorithms to run without losing any information — the event is not lost, it has been converted from a node to an edge.

[2] Networks, Crowds, and Markets: Reasoning about a Highly Connected World. By David Easley and Jon Kleinberg. Cambridge University Press, 2010.

Using degree centrality, Campana scaled the nodes — the larger the node, the higher the degree centrality. A high degree centrality means that a person had involvements with many people. There are only a few large nodes in this human trafficking network. Victims have a low degree centrality because they were involved in a single journey event. What Campana found was that a large number of offenders had a low degree centrality as well. This leads to the conclusion that human trafficking networks are not a single, centrally managed organization where all parts of the operation are conducted by the same individuals. There are a few with high degree centrality that play a major role, but most human trafficking offenders take part in a single event and leave the network. They do not take part in multiple trafficking events. Of the 25 offenders in the graph, 12 were involved in two trafficking events. Only two were involved in 75% of events.



For prosecutors, looking at cases one by one makes it difficult to see the context of an offense and the network that may surround it. A case involving a single trafficking event, may expose individuals involved in many more events. These individuals with high degree centrality are crucial for disrupting the network. In a study on co-offender networks, Lantz and Hutchison found that "the arrest of structurally important offenders… is significantly associated with the decreased offending of connected co-offenders."[3]

SUMMARY

Case management systems display details about individual cases. This view makes context and relationships difficult to see. A first-time violent offender may seem like an isolated event, but when their co-offender networked is graphed, there may be connections to a larger network of individuals driving crime. For prosecutors managing heavy caseloads, prioritizing the most dangerous offenders is crucial. Disrupting these networks by moving on high degree centrality individuals can have an oversized impact on violence.

In the case of human trafficking, connecting the low degree centrality nodes to individuals participating in multiple events seems to be the way to disrupt the network. The lower level nodes appear to be interchangeable, however, the two individuals involved in 75% of events are crucial to break up the network.

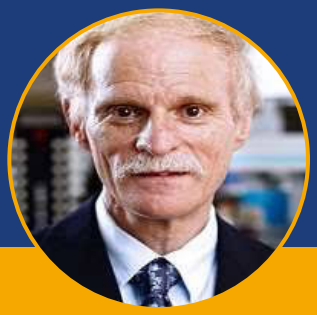
This article treated graphs as static structures. Criminal networks are not static. Graphs grow and relationships change over time. Crime is also geographic. Events have locations and nodes can be geo-located on a map. Viewing criminal networks based on geographic boundaries may provide interesting insights on crime. Furthermore, this article used single mode graphs, however, a common model for criminal graph data involves using people, objects, locations, and events. By graphing all of this data, connections to locations, events, and weapons become clear.

Social Network Analysis and graph theory are not new in criminal justice research; however, it is an underutilized tool in prosecutor offices. The focus tends to be on case management, conviction rates, and other performance metrics. Moving prosecutors towards a more intelligence-driven prosecution model will require using new tools and hiring analysts who can work with data in many different formats, not just the relational tables in a case management system.

Paul Crickard can be reached at paul.crickard@da2nd.state.nm.us or 505.681.9518

[3] Lantz, Brendan & Hutchison, Robert. (2015). Co-Offender Ties and the Criminal Career. Journal of Research in Crime and Delinquency. 52. 10.1177/0022427815576754.

PG Software and the Courts: The Verdict So Far



By **BRUCE BUDOWLE**

PhD, Professor at the University of North Texas (UNT) Health Science Center, Denton (TX)

Anyone who has watched an episode of CSI is aware of the value of forensic science — and particularly the impact of DNA, considered the gold standard of the forensic disciplines — on developing investigative leads and helping solve crimes. Linking the tiniest shreds of body fluid stains or tissues and determining who may have deposited those samples at a crime scene to bolster investigations all occur within the hour-long drama (actually 44 minutes due to the necessary commercials that bring us this and similar forensic-related entertainment shows).

While there is no denying the importance of DNA in successfully identifying the source of biological evidence or clearing an individual who has been incorrectly associated with biological evidence, the actual process of gathering, testing, and interpreting the results from DNA evidence is far more demanding than portrayed by Hollywood. Developing and interpreting DNA evidence are complex processes, and there are many underlying practices that must be carried out to generate reliable results and reduce chances of error. To support scientific evidence, the validity and reliability of forensic DNA scientific methods must be sought and demonstrated.

The forensic DNA field has set the standard in this regard, with extensive peer-reviewed studies, specialized journals for peer-review, and robust scientific debate. Yet, challenges to the admissibility of DNA evidence often arise in the legal setting.[1] The legal and scientific settings are interesting dynamics in which the foundations of both science and the law intend to bring out the truth by questioning scientific underpinnings and findings. The former uses an adversarial approach, and the latter relies on constructive criticism.

These two approaches are quite different at times in their intended outcome. Science continuously questions beliefs and findings to improve methods, which does not necessarily mean that the previously used methods were in error. Sometimes the methods do have flaws and this continuous questioning and improvement can identify problems so that advances are made.

To support scientific evidence, the validity and reliability of forensic DNA scientific methods must be sought and demonstrated.

Legal proceedings also consider the reliability of scientific evidence to ensure justice. The court's role is to screen out "junk" science and rightly so. Most of the time, the government seeks to enter, for example, DNA evidence that links an individual(s) to crime scene evidence(s) as it supports the government's position of who is the perpetrator of the crime. If the DNA evidence excludes a particular person as the source of evidence, the government typically does not proceed with the case. A defense attorney is unlikely to challenge DNA evidence that excludes his/her client.

In contrast, the defense is obligated to vigorously defend his/her client when the evidence is inculpatory. Therefore, there is an ascertainment bias regarding challenges of the admissibility of DNA (or any scientific) evidence as it is more likely to be challenged when the evidence does not support the defendant's position. Such necessary legal conditions (or rights) may pervert or conceal reliability and validity.

It is also important to caution against the concept that "as long as it gets admitted in the courtroom, everything is fine." Bad science can be admitted just as good science

[1] Budowle et al Ann Rev, Budowle et al JFS.

can be found inadmissible. It is challenging for any judge and the opposing lawyers to fathom the intricacies of DNA evidence, and an expectation that they will always get it right is unreasonable.

A better approach is, and always has been, that good science through proper research and documentation will serve to support admissibility. Indeed, every method of forensic DNA typing has been challenged, even those widely accepted and demonstrated to be reliable, and in a small subset of cases some evidence has been found inadmissible. In those few situations in which good science has not been admitted, the foundations were solid for the long haul to support its use. Those who use forensic DNA typing methodologies have a responsibility to understand and validate the technology and its applications. Doing so provides for confidence of its use, and proper significance in casework, while simultaneously meeting challenges in the legal setting. These challenges should be met most of the time if good science is carried out.

As with any analytical tool, DNA typing has its limitations. Poor quality samples, such as those of limited quantity or highly degraded, can present a huge challenge to obtain a result and/or interpret the results which, in turn, are used to reconstruct a crime scene. Similarly, mixtures containing DNA from three or more individuals can be quite complicated. One particular technology that has figured prominently in improving interpretation of DNA evidence is forensic DNA probabilistic genotyping (PG) software.

Using methods such as Markov Chain Monte Carlo (MCMC) that are routinely employed in computational biology, weather prediction, physics, engineering, and the stock market, PG software can help to extract more information contained in a DNA profile — information that overwhelmingly used to be discarded as inconclusive or uninformative. One benefit of PG software has been a substantial improvement in forensic analysts' abilities to interpret low-level, degraded, and/or mixture DNA profiles with greater efficacy and at a much higher degree of accuracy than the interpretational approaches previously used.

The scientific literature is replete with peer-reviewed studies on the use of PG software, and the tools are continuously being improved to increase efficacy and address challenges inherent in DNA typing of forensic evidence. Indeed, PG software has been embraced by the forensic science community, a number of PG software tools are readily available to the scientific community, and the software has already been used in thousands of cases around the world. For example, one such software, STRmix™, has been used to interpret DNA evidence in more than 160,000 cases worldwide since its introduction in 2012.

Laboratories using such PG software are experiencing an increase of interpretable DNA results from all sorts of items such as guns, other touch evidence, and sexual assault evidence. PG tools are also proving to be effective in helping to solve cold cases in which evidence that was originally dismissed as inconclusive has been reprocessed. Most recently, PG tools have been used to support exonerations of the wrongly convicted by reexamining inconclusive results in post-conviction cases that should have been deemed exclusions (for example, see the Lydell Grant case).[2]

As stated above, despite the support of the scientific literature, a good number of validation studies, and the demonstrated value to assist with interpretation of DNA results, the admissibility of results generated using PG software is being challenged in the courts in much the same way as any new technology (and all of the previous forensic DNA technologies) that is introduced. These challenges are particularly evident in countries with an adversarial system, such as the United States. While science should be debated in its own arena, the legal system does provide another layer that is important and must be considered for ensuring justice and setting precedent. The defense has an obligation to challenge such evidence, and the government typically has an obligation to demonstrate its reliability.

To date, the Daubert Standard has been the primary standard in which PG software has been challenged. For STRmix™ software alone, there have been at least 18 Daubert challenges

[2] https://www.click2houston.com/news/local/2020/07/03/despite-dna-evidence-texas-court-asks-for-more-evidence-before-exonerating-lydell-grant-from-2010-murder/.

While science should be debated in its own arena, the legal system does provide another layer that is important and must be considered for ensuring justice and setting precedent.

to the admissibility of the results generated, including relevance and reliability, validity as a scientific method, being novel, charges that the software is a black box, confronting the expert who is the developer of the software, access to the source code, and potential miscodes.[3] The courts overwhelmingly either denied motions to exclude such evidence or found the evidence admissible after holding a hearing in which the software generally was found to be accepted, scientifically valid, and satisfying Daubert criteria. For example, see Michigan v. Marlon Anthony Burns (Case No. 16-39193-FC).[4]

While the Daubert Standard is the law in federal jurisdictions and in more than half the states, the Frye Standard remains the law in several states. Frye requires that a new or novel scientific technique be generally accepted in the relevant scientific community, and in some states that the particular evidence derived from the technique and used in an individual case has a foundation that is scientifically reliable. California, Illinois, Pennsylvania, and Washington are among the states relying on the Frye standard.

Frye differs from Daubert in that it essentially focuses on a single issue, i.e., general acceptance by the relevant scientific community. In contrast, Daubert entertains multiple criteria beyond just general acceptance, such as (1) whether or not the technique can be or has been tested; (2) whether or not the method of analysis has been subjected to peer review and publication; and (3) whether or not the technique has an acceptable rate of error, as well as whether or not there are standards that control the technique's operation.

Under Frye, the courts again have ruled in favor of the admissibility of PG software. There are at least seven cases that have been challenged with respect to STRmix™ (for example see Minnesota v. Johnny Earl Edwards (File No. 02-CR-17-3290)).[5] Sometimes, both Frye and Daubert or similar standards have been considered. For example, see People v. Terrance Yates (Indictment No. 10663-2016), Colorado v. Ackerson (Case No. 2018CR85), and People v. William Tyrel Korn (Case No. 18CR84).[6]

Perhaps the most infamous of challenges was in New York v. Oral Nicholas Hillary (Ind. 2015-15), a controversial murder case in which the findings produced by two PG software programs (STRmix™ and TrueAllele) seemingly were in disagreement with each other. During a hearing, the court found that "STRmix™ has been developmentally validated and is generally accepted as reliable within the scientific community, [however] the lack of internal validation by the New York State Police crime lab… precludes use of the STRmix™ results." Unfortunately, unlike the STRmix™ results, those generated by TrueAllele have never been made available. But additional review would indicate that the STRmix™ results are supportable.[7]

Recently, the court in U.S. v. Daniel Gissantaner (Case No. 1:17-cr-130)[8] ruled that evidence produced using PG software was inadmissible due, in part, to the belief that the matching component was below a threshold percentage. The judge noted, however, that her decision was "not an indictment of probabilistic genotyping," while affirming "the court does not question the usefulness of probabilistic genotyping software as a sophisticated tool in forensic DNA analysis."

This decision by the judge appears to be based on the misunderstandings in the President's Council of Advisors on Science and Technology (PCAST) Report,[9] published in 2016. Interestingly, the report is supportive of probabilistic genotyping, stating "These probabilistic genotyping software programs clearly represent a major improvement over purely subjective interpretation." But it also rightly cautions "However, they still require careful scrutiny to determine (1) whether the methods are scientifically valid, including defining the limitations on their reliability (that is, the circumstances in which they may yield unreliable results), and (2) whether the software correctly implements the methods.

[3] https://johnbuckleton.wordpress.com/STRmix™.

[4] https://law.justia.com/cases/michigan/court-of-appeals-unpublished/2019/342712.html.

[5] https://law.justia.com/cases/minnesota/court-of-appeals/2019/a18-1632.html.

[6] https://johnbuckleton.files.wordpress.com/2018/10/yates-brooklyn.pdf; http://www.forensicmag.com/564088-Colorado-Court-Rules-STRmix-is-Relevant-and-Reliable-Practice-for-Interpreting-Likelihood-Ratios/; http://www.forensicmag.com/559238-Two-Colorado-Courts-Rule-Use-of-STRmix-Admissible.

[7] https://www.strmix.com/news/ruling-the-people-of-the-state-of-new-york-versus-oral-nicholas-hillary-ny-dna-evidence-admissibility/.

[8] https://casetext.com/case/united-states-v-gissantaner.

[9] https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast_forensic_science_report_final.pdf.

This is particularly important because the programs employ different mathematical algorithms and can yield different results for the same mixture profile." All should agree that validation and functionality are important.

The PCAST Report, however, then erroneously states on page 80, "Specifically, these methods appear to be reliable for three-person mixtures in which the minor contributor constitutes at least 20 percent of the intact DNA in the mixture and in which the DNA amount exceeds the minimum level required for the method." Since then, the opponents of PG software have focused on this 20 percent as a threshold for reliability. Unfortunately, PCAST got it wrong because the percent of DNA is not a sound criterion. Instead, the amount of signal in the DNA profile (as it has been for more than two decades) should be the basis for determining whether a DNA component of a mixture may be interpretable. An additional point to consider is that the PCAST Report is more than four years old, and one should know that substantial additional work has been performed since then – all supporting the validity of PG software and clearly demonstrating the fallacy of PCAST.

PG software — like any other software — has its limitations. It cannot interpret every DNA profile. There must be sufficient DNA signal in the profile to proceed with PG software. In addition, miscodes, for example, have been discovered, all of which have tended to be on the edges and have had no impact on reliability. There still may be undetected miscodes in any PG software which could impact reliability in some circumstance since the only software that can claim to have no miscodes (or bugs) is the software that has not been written yet. Rigorous testing by trained analysts is a sounder way to identify miscodes, as has been the experience with STRmix™ software.

An interesting challenge to admissibility of PG software has been that the source code be made available so that miscodes can be identified. Access to source code, however, varies widely depending on the developer, and NDAs have been utilized to allow review under controlled conditions. As stated above, though, software is actually tested better by examining its extended output which contains the intermediate steps of the interpretation process, allowing all to verify its accuracy.

From a purely practical perspective, reading source code is both costly and inefficient. Suppose a software has 100,000 lines of code and to manually scour the code takes about 30 seconds per line. That would equate to 833 hours of effort which in a constant 8-hour workday equates to approximately 104 days — hardly a trivial exercise in which humans would begin to tire and miss errors. Even more so, it is difficult to identify a miscode until it actually fires, as the ones found in, for example, the STRmix™ software have been in unlikely and thus not readily predicted situations.[10]

Rigorous testing through validation studies is a better solution. For testing to be effective, it is important that it encompasses the range of results that are expected to be encountered. Furthermore, analysts need to be adequately trained to identify when a fringe result is obtained during use. If these requirements are met, then the rare miscodes can be effectively identified and addressed.

All in all, the use of PG software is well-supported and has substantially advanced the "gold standard" of forensic science — DNA analysis. Undoubtedly, PG software will continue to have a profound impact on criminal and civil investigations by providing reliable data from a broader range of DNA evidence. Despite the vast data that support the reliability of PG software, legal challenges will continue. The defense, if it is of benefit, should challenge the admissibility of PG software to represent his/her client, and the proponents should use sound science to demonstrate its reliability.

Bruce Budowle, PhD, for the past 11 years, has been a Professor at the University of North Texas (UNT) Health Science Center, where he is involved in the research and validation of biotechnology and molecular genetics methodologies. He also is the Director of the Center for Human Identification. Dr. Budowle has 26 years of experience in forensic science with the Federal Bureau of Investigation. He served as research chemist at the Forensic Science Research and Training Center at the FBI Academy; was adjunct professor in the School of Continuing Education, University of Virginia, on the FBI Academy campus; was chief of the Forensic Science Research Unit in the Laboratory Division of the FBI Academy; and was a senior scientist in biology in the Laboratory Division of the FBI.

[10] https://www.strmix.com/news/summary-of-miscodes/.

WILLIAM J. FITZPATRICK

District Attorney

Onondaga County District Attorney's Office, Syracuse (NY)

Chief Law Enforcement Officer

Qualifications

JD — Syracuse University 1976

Professional Memberships and Activities

NDAA — President Emeritus

DAASNY — Board of Directors

Vera House

McMahon/Ryan Child Advocacy Center

NYS Forensic Science Commission

MEET A NDAA MEMBER

1. **What was the most unusual or interesting job you've ever had?**
   Worked for many years as a Ramp Supervisor for Pam American at JFK.

2. **What is your proudest professional moment?**
   I helped changed the way child deaths are investigated worldwide with the prosecution of Waneta Hoyt.

3. **What do you like most about being an NDAA member?**
   Networking and meeting new colleagues, some of whom are my closest friends in the world.

4. **What are your hopes for the Prosecution Profession?**
   That we never stop striving to get better, to get it right, to fight for our precious victims, to get smarter as a group.

5. **Where is your hometown?**
   Brooklyn, New York. I now live in beautiful LaFayette just south of Syracuse, New York.

6. **What was the best concert you ever attended?**
   Frank Sinatra at the Carrier Dome.

7. **What did you want to be when growing up?**
   A prosecutor…seriously

8. **What do you like to do in your spare time?**
   Golf

9. **What are 3 words that describe you?**
   Passionate, Loyal, Funny

10. **Favorite travel spot?**
    Ireland

11. **What's the best meal you've ever had?**
    Steak at Peter Luger's in Brooklyn

12. **Any random facts you could share with us?**
    I watched the moon landing in 1969 in the Soviet Union.

13. **How do you define success?**
    Faith, family, friends and accomplishments. Having a murder victims' family hug you after a guilty verdict. That's success!

Clear Communication in Courtrooms Is Essential

By **IAIN STEEL**
Managing Director, VP-AV Ltd., Andover (UK)
CARRIE KEELE
Channel Marketing Manager, Listen Technologies, Bluffdale (UT)

Clear communication in courtrooms and attorney conference rooms is essential to ensure all parties understand and are understood. In courtrooms, attorneys and clients may be seated in designated areas, apart from one another, making it difficult to share confidential information. One or more individuals might wear a hearing aid, cochlear implant or other device intended to amplify the audio. Face masks and physical distance requirements intended to mitigate the spread of COVID-19 further impact speech intelligibility in these situations. In some instances, there might also be language barriers requiring interpretation.

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Assistive listening solutions can help in each of these scenarios. There are several technologies that can be used in and outside the courtroom.

INFRARED TECHNOLOGY IN THE COURTROOM

One type of assistive listening uses infrared (IR) technology (think of a TV remote and the beam of light emitted from a handheld remote to the TV). IR audio distribution in the courtroom is preferred in several countries because it is secure. The audio signal from a microphone or a playback device such as an audio recorder is sent to a transmitter, which transmits the audio signal to small, portable receivers that Users wear on a lanyard around their neck. The court or their legal counsel typically provide the receivers. For those with hearing aids with a telecoil or cochlear implants, a neck loop can be used to send the signal directly to their hearing aid.

IR technology delivers clear, intelligible sound to listeners. They can adjust the volume on receivers to meet their needs. Unlike induction loop sound systems that use an electromagnetic signal to send audio to hearing aids and require significant construction or retrofitting of spaces and enable people outside the looped room to listen in, IR assistive listening systems can be set up quickly without disruption to architecture and without worry that hearings and private conversations will spill over into adjacent courtrooms. Confidentiality is assured because IR light cannot travel through walls.

In the United States (US) and United Kingdom (UK), IR assistive listening systems typically are deployed in individual courtrooms and tribunal hearing rooms, with signage promoting their availability. The receivers and lanyards are easy to sanitize before and after use, and they charge quickly in a portable tray. Systems are universal in design and intuitive so users can benefit from them quickly with minimal instruction. IR assistive listening systems meet US ADA (Americans with Disabilities Act) and UK Equalities Act requirements.

FOR INDIVIDUAL COMMUNICATION OR LIVE TRANSLATION

Another option for assistive listening or communication is radio frequency transmission, or RF. RF-based technology is portable and can be used inside or outside the courtroom. Users wear a small transceiver — combination transmitter receiver — on a lanyard around their neck or clipped to their belt. There is no hardware to install in the courtroom or attorney offices. Users can use their own earbuds with built-in mic, or a venue-provided headset. Push-to-talk functionality lets users speak to others wearing the units simply by pressing a button.

The system was designed for ease of use and can be used in multiple confidential groups in the same room, up to a maximum of 10. It is easy to set up a group and add participants, as necessary. To expand a group, users simply hold the units near each other. Near field communication (NFC) technology connects the units and they are good to go. When one user speaks, clear sound is delivered without latency over great distances. Using a mobile communication system allows attorneys to quietly confer with colleagues and clients in the courtroom, during meetings, depositions, and side bar conversations — all while maintaining distance and wearing masks. Units are encrypted for security and to preserve confidentiality. When users are not pushing a button to talk, their hands are free to write or type notes.

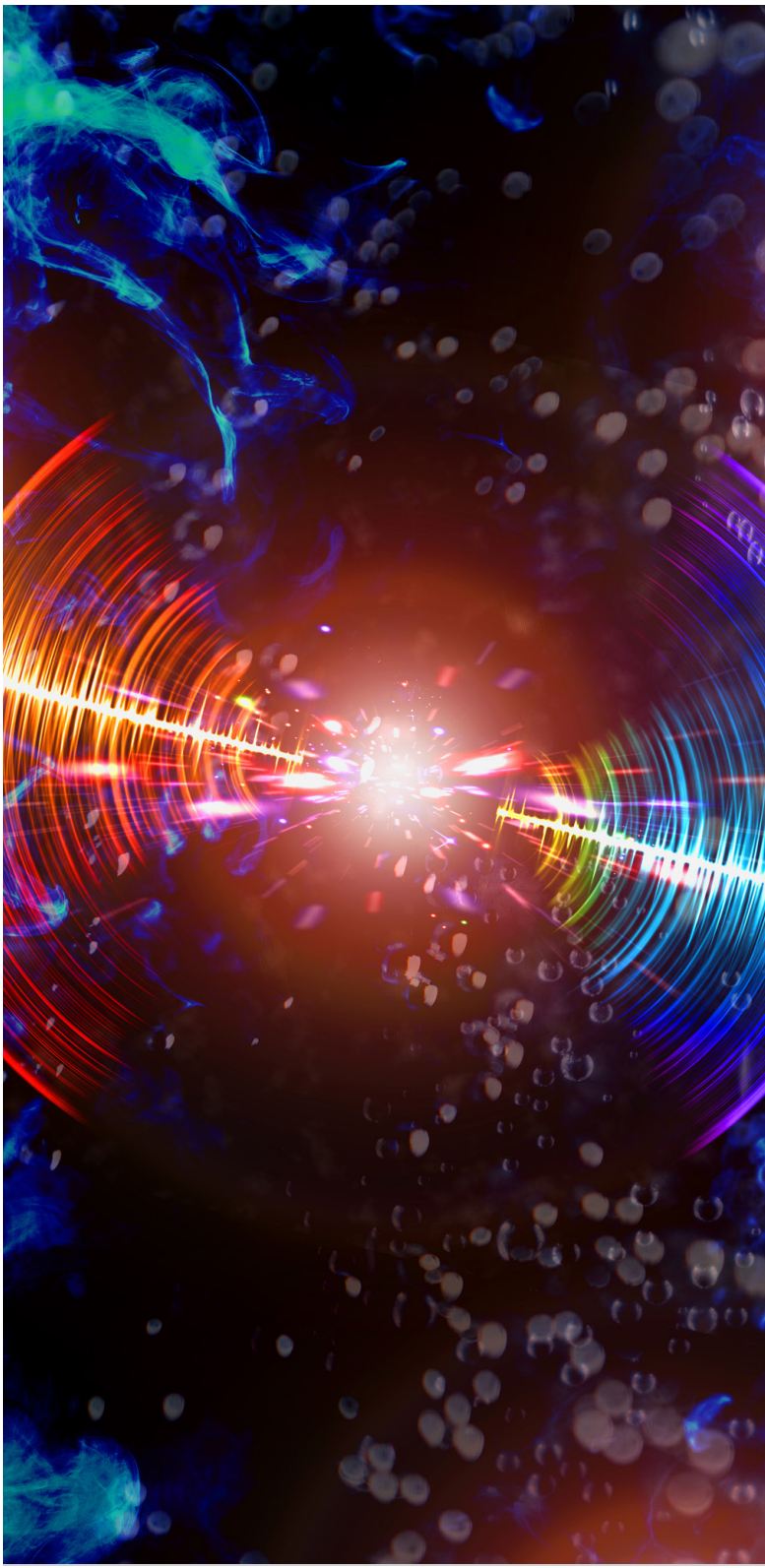
Similar to systems using IR technology, two-way communication system units can be sanitized and disinfected between use and stored and charged in portable trays. Multiple US courthouses are using Listen Technologies' ListenTALK, a mobile two-way communications system.

CLEAR COMMUNICATION IS ASSURED

In response to the global pandemic and in efforts to keep one another safe, handshakes have been eliminated and face-to-face conferences replaced by virtual meetings. Walking closely with colleagues to the courtroom or asking to approach the bench (from closer than six feet away) are no longer permitted. Yet, essential services in the justice system cannot be compromised. Clients still need counsel and representation, and attorneys and clients demand confidentiality. Assistive listening technologies can help attorneys and clients safely and securely hear and understand each other in courtrooms and conference rooms.

Iain Steele is Managing Director at VP-AV Ltd., a major supplier to leading judicial organizations in the United Kingdom. https://vp-av.co.uk/

Carrie Keele is Channel Marketing Manager at Listen Technologies, a wireless audio manufacturer that provides solutions for assistive listening, multilingual audio transmission, and guided or self-guided tour groups and conferences. www.listentech.com



Prosecutorial Power in the Age of Criminal Justice Reform

By **WILLIAM P. RING**
County Attorney, Coconino County (AZ)
NELSON BUNN
Executive Director, NDAA

Marvel's superhero movies thrive upon the idea that, to right the wrongs in society, justice must be served by superheroes that wield more power than traditional law enforcement is able to muster. And no villain is ever charged with a crime for all the mayhem.

In real life, however, law enforcement and prosecutors face criminal events every day with the tools provided to them through laws and processes at the federal, state and local levels. These tools are limited by the Constitution, state statutes, the Rules of Evidence and the Rules of Criminal Procedure. Together, the authority and the tools exist so the prosecutor can advance justice and the common good for the communities they serve. Prosecutors then use discretion to moderate and regulate a public sense of justice. This all occurs inside a justice system that assigns the prosecutor the burdens of both proof and persuasion.

So, what is a prosecutor? A prosecutor is a person trained in the law and procedure that carries out his or her duties on behalf of the State. State law and rules define the qualifications of the prosecutor, the methods of prosecution, and how the position is carried out. It is the law that defines where the prosecutor's assignments begin and end.

Some critics claim that the modern prosecutor has enormous power. In fact too much power. Of course, when the focus is upon power the tendency is to see it expanding. Critics too easily malign prosecutors without considering how this balance of power is carefully put together, which is worth examining.

First, criminal laws exist to ensure public safety. The administration of a justice system promotes both truth and accountability. The end goal is to ascertain the truth and secure a just determination in every case. One consequence is to impose just punishment upon those whose conduct threatens the public peace.

Few citizens realize that the prosecutor is the only person in the criminal justice system who is responsible for presenting the truth. Meanwhile, the rules and methods protect the fundamental rights and the presumed innocence of the accused. A prosecutor can only seek a charge when there is sufficient, admissible evidence for the prosecutor to reasonably believe a jury will convict the accused with proof beyond a reasonable doubt.

Few citizens realize that the prosecutor is the only person in the criminal justice system who is responsible for presenting the truth.

In real life, evidence is often inadmissible. Witnesses are frequently unavailable. There can be some admissible evidence, but it may not be a sufficient amount. The prosecutor has the burden of putting all the evidence together. If it is sufficient it is the jury, not the prosecutor, that reaches a decision about innocence or guilt.

The prosecutor must disclose all the evidence, admissible or not, to the accused well before trial. While the prosecutor shows all the cards, the accused has the right to remain silent and put the prosecutor to the test. The prosecutor should not use the media to sway public opinion before trial while the accused is not so constrained. The accused has the right to an attorney. The accused has the right to a speedy trial, to a jury trial, and to conviction only by a jury. If convicted, the accused has a right to appeal. The accused has a right to due process and to equal protection of the laws. Few know that the prosecutor has an affirmative duty to rectify any unjust convictions of the past. In fact, prosecutors are adding

conviction integrity units more and more often to their Offices to assure that a just result has been achieved.

The judge mediates all these proceedings to assure that the law is applied fairly. The judge, not the prosecutor, rules upon objections about facts and law. The judge, not the prosecutor, instructs the jury about the law and leaves the jury to decide the case.

The prosecutor continuously exercises discretion about the strength of the case, the doubt about guilt, the extent of harm and the input of victims. The prosecutor considers the improper conduct of law enforcement and the impact of prosecution on the public welfare. The prosecutor factors the background and characteristics of the offender, including voluntary remorse and potential for rehabilitation. Importantly, the prosecutor weighs the public's interest that the matter may be resolved in some way other than prosecution such as deferral, diversion or dismissal. The prosecutor considers whether the punishment is proportionate to the offense, whether the result is unwarranted given the treatment of other similar persons, and whether it is fair and efficient to use scarce resources to seek a charge at all.

Prosecutors are not exempt from criticism. And power among the parties can oscillate over the course of time. But consistent with our history, the power the prosecutor has is merely the limited authority granted by the State to act with expertise and make fair decisions. Simply put, it is the power of decision-making. Yet after a decision to seek charges, very few decisions that the prosecutor makes ever actually determine a case. Instead, a prosecutor's decisions are likely only to affect the outcome of the next decision to be made by others, either the judge, the jury, or the accused.

Making decisions is what we all do in our own lives and for our own families. The prosecutor's decision-making authority is not enormous and it is not unlimited or unfettered. It is constrained by all the factors above. What critics are really seeking of prosecutors is a different decision-making and better use of discretion. These critical conversations and disagreements are manageable because the precondition for innovation is already set. Prosecutors around the Nation are often the first innovators when it comes to the collaboration, development and implementation of new programming to meet the shifting needs of their communities in the common effort to seek truth, to do justice, and to protect the innocent. To be clear, there are bad actors that prey upon our communities who warrant due punishment—that's justice. However, justice doesn't always mean incarceration. Prosecutors evaluate all paths to justice based upon their communities' needs and expectations, their own prosecutorial discretion, and the tools at their disposal. They do so every day to ensure two broad objectives: a more fair, equitable, effective and efficient criminal justice system, and the preservation of their communities' sense of safety and security. This is the business of ordinary heroes who live in our communities and who work for our common good.

Well-being Is No Longer Optional

By **KIRSTEN PABST**
County Attorney, Missoula County (MT)
MARY ASHLEY
Deputy District Attorney, San Bernardino County (CA)

Our profession must implement structural changes now to account for secondary trauma, promote organizational health and ensure employee resilience.

I was out of law school only a few months, just into my role of prosecuting misdemeanors and traffic offenses, before being called-out to my first crime scene in the middle of the night. The suspect had slashed the victim's neck and fled on foot, leaving the victim bleeding out on the dirty floor of the old trailer, amidst garbage, half-finished crosswords and animal waste. By the time I got there, the victim had been taken to the hospital and detectives were already processing the scene — taking photos, gathering evidence and swabbing for forensics. As I stared at the coagulating pools, I was struck by two things that have stayed with me for the last 25 years: my awe of the human body's capacity to hold and lose so much fluid, and that smell — the distinct mixture of blood, alcohol and squalor.

Before long, my physical and internal landscapes, like most prosecutors who handle crimes of violence, were dotted with bloody icons of human tragedy and suffering.

In the decades to follow, there were countless more crime scenes, gruesome photographs, horrific stories and jury trials. On the way to my kids' grade school, I look left and think about the college student who was strangled in the ground-level apartment and then dumped on Blue Mountain Road. The slant streets area conjures images of a schoolteacher who was bludgeoned with an iron on an Easter Sunday decades before. Before long, my physical and internal landscapes, like most prosecutors who handle crimes of violence, were dotted with bloody icons of human tragedy and suffering.

PROSECUTORS ARE EXPOSED TO AND SUSCEPTIBLE TO SECONDARY TRAUMA STRESS

Career prosecutors who handle crimes of violence and human tragedy will often say that the most effective prosecutors are those who deeply connect with people and authentically convey to jurors the elusive essence of human tragedy. Serving as front-line warriors fighting for justice on behalf of those who have experienced tragedy at the hands of another is noble and necessary work but is often not sustainable — at least the way we've been doing it. It is no surprise that prosecutors often display classic symptoms of long-term exposure to secondary trauma, which can mirror the symptoms of PTSD. Many once exuberant ADAs pivot from, "This is God's work — I don't do it for the money," to "You can't pay me enough," as they pack their diplomas for a lucrative practice in a law firm with less rewarding work, lots more money, and very little gore.

For those that stick it out, the rewards of a career in prosecution are great but the cost can be very high. In my 25 years, I've lost colleagues to suicide, heart disease, and addiction and seen others gradually go from young, vibrant, enthusiastic public servants to barely recognizable, burnt-out, cynical, and badly degraded copies of their former selves.

As a professional community, we recently started discussing the need to address secondary trauma stress [STS] in front-line professionals who work with victims of abuse. And we just now started embracing the idea of holistic well-being

in the field of criminal prosecution, a profession saturated with violence and trauma. Professor Rachel Naomi Remen, Osher Center of Integrative Medicine at the University of California, San Francisco, said, "The expectation that we can be immersed in suffering and loss daily and not be touched by it is as unrealistic as expecting to be able to walk through water without getting wet."[1]

It is time to turn the crystal and see our profession both as it is — survivable — and as it can be — thrivable.[2] Well-being is no longer optional. We must pivot and implement structural changes which account for prosecutors' unique challenges, promote organizational health and prevent our mentees from flaming out.

THE EFFECTS OF SECONDARY TRAUMA STRESS ARE CUMULATIVE

As a profession, we've been catching up on studying primary trauma as we begin to understand the profound effects of traumatic experiences on the human brain. We are learning that when a person or child suffers ongoing or intense abuse, the experience actually changes the physiological structure of the brain and ushers in psychological effects that change the person's view of and response to stress, to others and to the world. Trauma affects the brain's ability to process information, recall events and communicate to others.[3]

Similarly, indirect exposure to others' trauma such as listening to details of abuse, preparing cases for court and pouring over photographic evidence accumulates over time and, unless the person utilizes strategies for preventing and addressing STS, that cumulative exposure can significantly impact the professional's work life, personal life and mental health.[4]

Secondary trauma — sometimes referred to as vicarious trauma, compassion fatigue, or burnout — is just gaining recognition in the legal field and is the manifestation of long term, repetitive exposure to work-related human tragedy.

1 Rachel Naomi Remen: *Kitchen Table Wisdom: Stories that Heal*, Penguin, New York, 1996.

2 Author's word.

3 *Reducing Compassion Fatigue, Secondary Traumatic Stress and Burnout*, William Steele, Routledge 2020.

4 Id.

STS largely impacts professionals on the front lines of the helping fields such as social work, emergency medicine, law enforcement, mental health and, in our case, prosecution.

STS largely impacts professionals on the front lines of the helping fields such as social work, emergency medicine, law enforcement, mental health and, in our case, prosecution. Constant and cumulative exposure to violence and trauma through work has documented negative effects, personally and professionally. Secondary trauma, like primary trauma, alters brain function.[5]

Trauma psychologists tell us — and we've seen firsthand — that those who work with victims of crime for prolonged periods of time often experience symptoms similar to those of PTSD, such as difficulty concentrating, headaches, stomachaches, depression, intrusive images, nightmares, strained personal relationships, fatigue, difficulty sleeping and compromised parenting.[6] Andrew Levin, M.D., Assistant Clinical Professor of Psychiatry at Columbia, wrote, "[T]here is a consensus that STS and VT (vicarious traumatization) degrade the professional's ability to perform his or her task and function in daily life beyond the job."[7]

Like criminal investigators, prosecutors and staff who work with victims of violent crime are at very high risk to suffer the effects of STS and the best ones often are affected to a greater degree. In fact, according to secondary trauma expert Andrew Laue, LCSW, "Professionals who are the most successful, because of their ability to openly and effectively engage with victims, suffer the greatest negative consequences of secondary trauma."[8]

Reactions to the cumulative effects of STS vary and are influenced by internal and external factors. Unmitigated, STS can be destructive and — especially coupled with other challenges prosecutors face, and can lead to physical, psychological and social problems.

THE LEGAL PROFESSION IS IN TURMOIL

Chronic exposure to stress hormones is detrimental to body and brain. What was once an adaptive survival response has become chronic and maladaptive. The result is that our ability to regulate the physiological response to stress decreases over time and returning to stasis takes longer and longer, exposing us to long-term consequences.[9]

Attorneys seem particularly susceptible to the ill-effects of poorly managed work stress and are at an elevated risk of substance use and mental health disorders.[10] According to a study conducted by the American Bar Association (ABA), published in 2016, with over 12,000 practicing lawyers participating, up to 36% qualify as problem drinkers, and up to 28% are struggling with some level of depression, anxiety, and stress.[11]

PROSECUTION: A RECIPE FOR DISTRESS

Exposure to STS is one of many compounding factors leading to burnout in prosecutors.[12] Combined with other unique stressors such as burgeoning caseloads, long and densely packed schedules, dwindling resources, decades of racial and gender inequality, virulent accounts of police misconduct, and lack of authentic peer support, all set in an intentionally competitive and adversarial role, this career that we love often isn't viable in the long term. Even though STS is considered a normal response to this kind of work, it often results in decreased productivity and interest in work, increased use and abuse of substances and high turnover. And responding to employees in crisis is expensive and disruptive, as is training new attorneys to replace ADAs who leave.

Despite the level of suffering and negative personal and financial effects of secondary trauma on prosecutors — particularly those working in domestic and sexual violence, child abuse and homicide — there remains a notable lack of programming designed to prevent and mitigate the negative effects on those dedicated employees. How can we make our work sustainable?

[5] Id.

[6] Id.

[7] *Vicarious Trauma in Attorneys*, A. Levin and S. Greisberg, Pace Law Review, 2003.

[8] Andrew Laue, LCSW, Developer of the STAR-T program (Secondary Trauma Activates Resiliency).

[9] *Vicarious Trauma in Public Service Lawyering: How Chronic Exposure to Trauma Affects the Brain and Body*, Zwisohn, Handley, Winters, Reiter, Richmond Public Interest Law Review, 2019.

[10] *The Path to Lawyer Well-being: Practical Recommendations for Positive Change*, Nat. Task Force on Lawyer Well-being Report (2017).

[11] Id.

[12] *Vicarious Trauma in Public Service Lawyering: How Chronic Exposure to Trauma Affects the Brain and Body*, Zwisohn, Handley, Winters, Reiter, Richmond Public Interest Law Review, 2019.

IMPLEMENTING ORGANIZATIONAL RESILIENCE STARTS AT THE TOP

Changing an ingrained culture takes time but has to start with leadership. The role of the public prosecutor is unique and rapidly evolving and must allow for adaptation and growth. Altering the course of a freightliner at sea takes time, intention, and most definitely involves the captain. Instituting a culture of well-being necessitates buy-in from all of the team and, consequently, must start with leadership.

Instituting a culture of well-being necessitates buy-in from all of the team and, consequently, must start with leadership.

Erika Tullberg, an expert on secondary trauma and assistant professor at New York University's Child Study Center explained the importance of making changes at the institutional level. Tullberg said, "The most important component of mitigating the impact from secondary trauma (and the best way to limit employees from developing it in the first place) is through organizational changes."[13] Similarly, the ABA recommends organizational programs designed to counter secondary trauma in the legal system,[14] stressing that larger scale strategies and systemic changes are key in addressing STS.

HOW LEADERS CAN CULTIVATE A CULTURE OF WELL-BEING

Leaders bear much responsibility for employees' well-being and should provide sustainable work environments, understanding that employees' self-care, though important, isn't enough. That expectation implies that there is a pathology or depletion that is the responsibility of the individual alone. We must make structural and organizational changes that build in secondary trauma processing and employee resilience as competencies, acknowledge the depletion inherent in the job, and provide mechanisms to neutralize it.

1. **Start with your mission statement.**

   Does your mission statement contemplate sustainability of the staff? Examine and refine your department's core values and consider incorporating well-being into your stated values and mission statement and include resiliency skills as required professional competencies.

2. **Offer a plausible work landscape (PWL).**

   Prosecutors' caseloads are notoriously high. New ones sink or swim. The tough survive. Sort of. Like Pavlov's hierarchy, the prerequisite to organizational health requires hosting a PWL, in which leaders look at staff caseloads with new eyes and adjust. Learn to identify signs of burnout or disengagement and provide opportunities for respite. Check your best litigators' vacation banks and insist they use it. Another approach is turning one of your less-stressful full-time employee (FTE) slots into rotating temporary placement where trial attorneys can rest for a few months and recharge. Although it is important for us to teach resiliency skills and foster peer connection, none of that matters if unmanageable caseloads keep your people in crisis. We must make sure the landscape is compatible with life before we look at improving the quality of that life.

3. **Initiate an office-wide well-being program.**

   Many organizations have jumped onto the wellness bandwagon and, to their credit, initiated "wellness" programs. Others have rolled out "well-being" programs. What is the difference? Are the terms interchangeable?

[13] American Bar Association, *Understanding Secondary Trauma*, Vol. 34. No. 9, Sept. 2015 (pg. 136).

[14] ABA, Center for Children and the Law, *Understanding the Impact of Secondary Trauma on Lawyers Working with Children and Families*, presentation by Carly Baetz, psychologist at Mount Sinai Health System, Center for Child Trauma and Resilience, New York, 2016.

Not really. While wellness is the primary responsibility of the employee, well-being is best accomplished when employers provide adequate opportunities and secure funding for well-being. When organizations offer well-being programs — and workers seize the opportunities therein — everyone benefits. Employers who offer comprehensive well-being programs report higher productivity, better results, and less adverse medical and emotional stress amongst workers.[15] Other strategies include incorporating resiliency skills in professional competencies, providing training on brain science and teaching resonate listening skills.

4. Host an in-house secondary trauma group.

About five years ago, I started a formal Secondary Trauma Group [STG] as a major component of our well-being program.[16] Working together with an expert in secondary trauma, our employees learn the fundamentals of trauma and secondary trauma; practice using resiliency tools while understanding the basics of neuroplasticity; participate in peer-facilitated critical incident support, which includes investigators and, in one instance, our jury. The expense and time commitment were minimal and the results — less turnover, better morale — have been significant.[17]

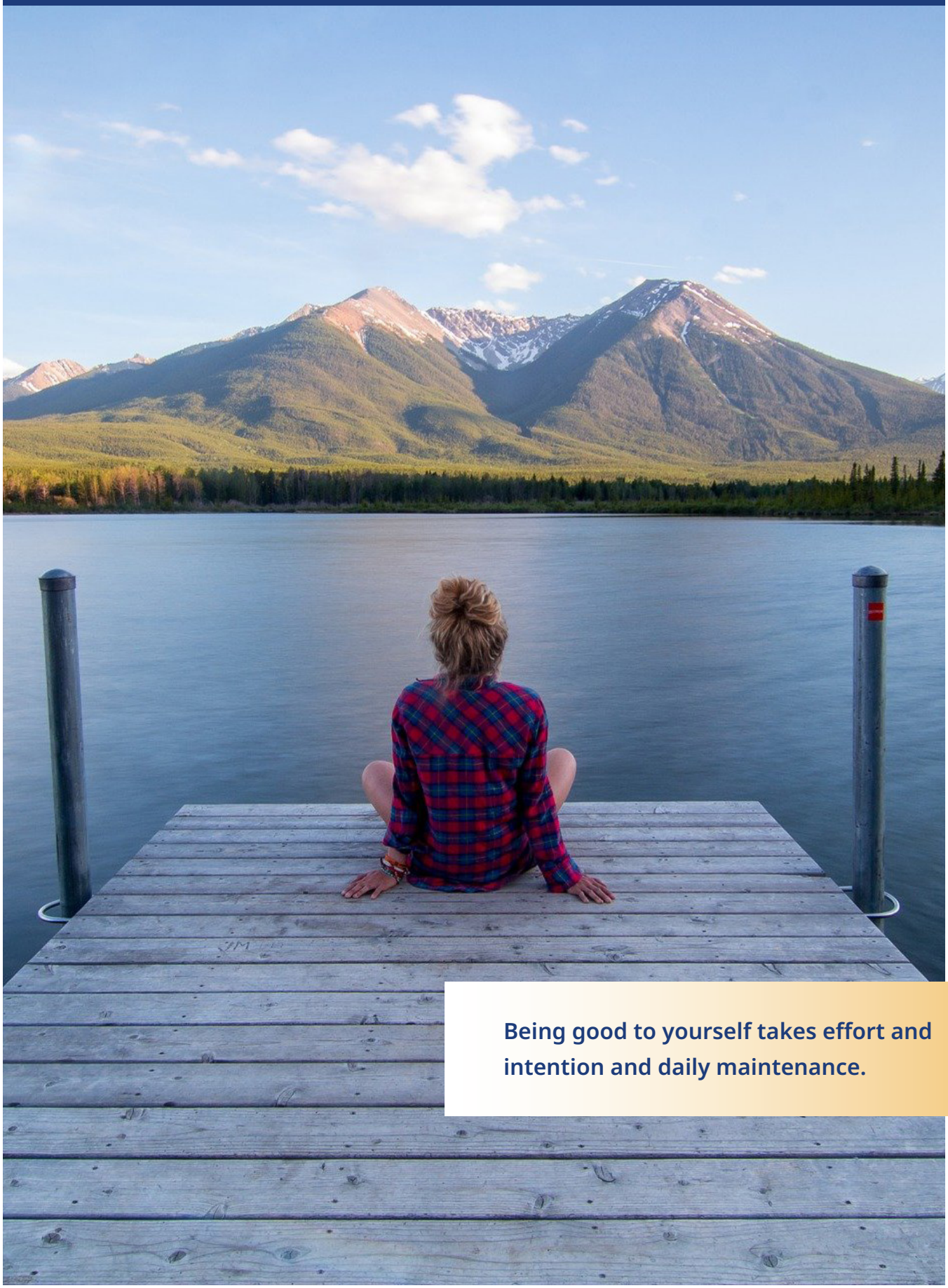
5. The importance of a formalized peer support program.

Peer support groups provide prosecutors and staff a place to share their experiences and receive informal support. While not every member of a district attorney's office needs formal assistance or suffers from secondary trauma, nearly everyone at some point in his or her life is in need of compassion and empathy — at the very least, a friendly ear or shoulder when a bad day or personal challenge leaves one struggling. The Substance Abuse and Mental Health Services Administration (SAMHSA) has long advocated and utilized research to reinforce the power of peer support.

[15] *Reducing Compassion Fatigue, Secondary Traumatic Stress and Burnout*, William Steele, Routledge 2020.

[16] Did You Know? Prosecutor Wellness, Prosecutors' Center for Excellence.

[17] Missoula Deputy CAs, along with other human service workers, video discussion about burnout from STG in this STAR-T video and the benefits of STG in this STAR-T trailer.



Being good to yourself takes effort and intention and daily maintenance.

"Peer support encompasses a range of activities and interactions between people who share similar experiences. This mutuality, called 'peerness,' between a peer support person and a person seeking help promotes connection and inspires hope. Peer support offers a level of acceptance, understanding, and validation not found in many other professional relationships."[18]

Some positive reported outcomes for individuals who receive peer support are increased self-esteem and confidence, increased sense of control and ability to bring about changes in their life, raised empowerment, and a feeling that treatment can be responsive and inclusive of their needs.[19] Workers trust peers over supervisors, because they understand your job, the atmosphere, and experiences within the profession. Peer support programs have done well in the fields of law enforcement, emergency, fire, and first responders.

THE RESPONSIBILITY OF EVERY PROSECUTOR

The responsibility of well-being is equally carried by each worker and management. Stress, adversity and trauma are unavoidable realities in a prosecutor's world. Despite swimming in life's most horrific stories, we can control how we respond to such challenges, learn to metabolize work stress by practicing resiliency skills, support our colleagues through resonate listening, and reframe how we look at stress as an impetus for personal and professional growth.[20] Being good to yourself takes effort and intention and daily maintenance. Here's your assignment:

1. **Schedule and prioritize self-care**,[21] like exercise, outside activities, social connection. Self-care alone, as noted above, isn't enough, but remains a crucial part of sustainability.

2. **Try meditating**.[22] Take time every day to quiet your mind, like going for a walk, checking in with a friend, or single tasking a cup of tea.

3. **Practice gratitude**. Take the gratitude challenge.[23]

4. **Manage anxiety**. Practice noticing where you harbor stress in your body and teach your brain to forge new neuropaths.[24] Stay in your window of tolerance between hyper-arousal and numbness.

5. **Learn and practice resiliency skills**. Build your own, personalized resiliency toolbox.[25] It is important to understand that resilience requires 1) awareness — paying attention to how our bodies and brains respond to stress, and 2) connection — through resonant listening and peer support.

6. **Offer support** to colleagues through resonant listening and peer support. If your office doesn't have a formal peer support program, start one!

I KNOW

To most of us old-timers, this all seems a little touchy-feely, a little woo-woo. But the reality is that using proven techniques to make our work sustainable is not only supported by science,[26] it is rapidly becoming our ethical obligation,[27] and is well on its way toward mainstream. The ABA is recommending that all states modify the rule of competence to include well-being. If we are knowledgeable and prepared enough to try a case, shouldn't we also be emotionally and mentally strong? Let's not watch any more of our colleagues fall as we stand by admiring our own grit or worse, feeling responsible.

Remember why you chose this work and recall that moment you knew that you were on the right path, regardless of what obstacles lay ahead. You handled it, sure, but what about those who didn't? So many of our prosecutor friends over the years, have taken their own lives, died way too young, or succumbed to addiction. And, of those who handled it, who didn't handle it well? And should we have to "handle" it? Why not crush it? Why not thrive?

[18] Shery Mead & Cheryl McNeil, Peer Support: What Makes It Unique, 10 INT'L J. PSYCHOSOCIAL REHAB. no. 2. 2006, at 29–37.

[19] Substance Abuse & Mental Health Servs. Admin., Value of Peers, 2017.

[20] Optimizing our response to stress, J. Hollway, In Recess, Nov. 11, 2020.

[21] Small Steps to Well-being, K. Pabst, In Recess.

[22] Clearing the Crime-Scene Cobwebs: Meditation for Skeptics, Old-Schoolers & Beginners, K. Pabst, In Recess.

[23] An Attitude of Gratitude, S. Broderick, In Recess.

[24] Toolbox Tip: One-minute Anxiety Buster, K. Pabst, In Recess.

[25] The Vicarious Trauma Toolkit, Office for Victims of Crime.

[26] Clearing the Crime-Scene Cobwebs: Meditation for Skeptics, Old-Schoolers & Beginners, K. Pabst, In Recess.

[27] *The Path to Lawyer Well-being: Practical Recommendations for Positive Change*, Nat. Task Force on Lawyer Well-being Report (2017).

Well-being Webinar Schedule

- **February 9, 2021**
  Optimizing Your Response to Stress — *John Hollway, Associate Dean Penn Law*
- **April 3, 2021**
  3 P's Peer Programs for Prosecutors: How to build a peer support team in your office — *Mary Ashley, San Bernardino District Attorney's Office*
- **June 8, 2021**
  It is a Real Thing: The Impact of Secondary Trauma on our Most Effective Prosecutors — *Andrew Laue, LCSW*
- **August 10, 2021**
  Stop the Interrogation: How to Stop Arguing Ourselves Out of Good Relationships — *Chris Osborn, JD, ReelTime Creative Learning Experiences*
- **October 12, 2021**
  Vibrant Leadership — *Kirsten H. Pabst, Missoula County Attorney, Missoula, MT*
- **December 14, 2021**
  Trauma Stewardship: A Book Club Review — *Lorrin Freeman, Wake County District Attorney, Raleigh, NC and Kimberly Overton Spahos, Chief Resource Prosecutor, NC Conference of District Attorneys*

NDAA'S NEW WELL-BEING TASK FORCE

NDAA President Nancy Parr has made prosecutor well-being one of her priorities for 2021 and we couldn't be more excited! President Parr assembled a taskforce that hit the ground running last Fall by launching weekly blogs, planning future retreats and conferences and organizing a series of webinars that kicked off in December 2020 and are scheduled to run through 2021. Missoula County Attorney Kirsten Pabst was named Chair of the Task Force, with DDA Mary Ashley from San Bernardino County as Vice-Chair. The taskforce members, consisting of a circle of career prosecutors — plus one well-being professional — with shared expertise and/or special training in secondary trauma, burnout, vicarious trauma and compassion fatigue have been remotely convening monthly to address the challenges that face prosecutors from across the nation and help make our critical work more sustainable.

Our current projects include writing and publishing In Recess, our dedicated weekly blog filled with short articles, everyday tips, videos, and other good, easily digestible information. Check it out and sign up for a free account to get weekly notifications.

And. . . coming soon. . . we are rolling out a national peer connection and support service for all prosecutors (stay tune). Additionally, we will be launching a resource hub on the NDAA site, where we'll offer a collection of resources, articles, books and other materials. Whether interested in your own well-being, concerned about a colleague or contemplating implementing an in-office program, we hope to provide a centralized hub for you to find what you need, to support your colleagues, office and profession.

Finally, we are also working on hosting — at a site TBD — a retreat for prosecution team members where we'll learn the latest in the neuroscience of well-being while physically and mentally unwinding for a few days. Education, food, relaxation, nature and CLE credits will be featured.

We invite, encourage and challenge you to take this new journey with us into a stronger, prioritized and focused area of well-being.

CONCLUSION

We invite, encourage and challenge you to take this new journey with us into a stronger, prioritized and focused area of well-being for prosecutors across the nation. It will only get better from here.

For many career prosecutors, the years of being subjected to violent images, human suffering and the hypervigilance it creates takes its toll, even on the "toughest" of prosecutors. In 2021, we need to create a new "toughness," one that acknowledges the struggles and incorporates time for self-care and a commitment to the appropriate work-life balance. Training and education for prosecutors to build their resiliency skills and allow healthy space for peer support and other well-being strategies has become critical.

A prosecutor who is emotionally supported by their organization and trained to manage stress is a far better reasoned and capable decision maker who can exercise good judgement and perspective on each case. Thriving organizations foster vibrant team members who then provide better services to the victims and communities we serve. Win, win, win.

NDAA's Well-being Task Force Members:

- Kirsten Pabst, Chair, Missoula County Attorney (MT)
- Mary Ashley, Vice Chair, San Bernardino County (CA)
- Jennifer Webb-McRae, Cumberland County (NJ)
- Joe Dallaire, City of Fairbanks (AK)
- John Hollway, Quattrone Center
- Kimberly Spahos, North Carolina Conference of District Attorneys
- Lou Anna Red Corn, Fayette County (KY)
- Michael Rourke, Weld County (CO)
- Susan Broderick, NDAA Staff Liaison

Additional Resources:

- Coping during COVID
- ABA page to lawyer assistance crisis hotlines in each state.
- NDAA's Prosecutor well-being blog, In Recess
- Did You Know? Prosecutor Wellness, Prosecutors' Center for Excellence
- STAR-T program: Secondary Trauma Activates Resiliency
- Suicide prevention programs by state
- The Institute for Well-Being in Law
- Secondary Trauma Group wins NACo's Brilliant Ideas at Work award
- Public Radio, Prosecutors Recognized For Fighting 'Secondary Trauma'

Kirsten Pabst is the Missoula, Montana County Attorney and chairs NDAA's Well-being Task Force. Mary Ashely is a Deputy District Attorney in San Bernardino County and serves as the task force's Vice-chair.

If you have questions, need for information or have good ideas for us, let us know by sending an email to Susan Broderick at sbroderick@ndaajustice.org or any of the task force members.

MEET THE NDAA TEAM

KIONA D. GAINES

Assistant Director of Membership & Marketing

Job Responsibilities

- Board of Directors and Executive Committee Liaison
- Office management
- Communications
- Intern coordinator

Qualifications

Bachelor's Degree with a double major in Political Science and Business from Randolph-Macon College, 2016

1. **Before working at NDAA, what was the most unusual or interesting job you've ever had?**
   Room Service Associate — Dietary Department at Sentara Halifax Regional Hospital

2. **What is your favorite part about working for NDAA?**
   Overseeing the internship program is great because it is amazing to see the transition between an intern's first and last day. I enjoy being able to use my own background to help guide them during their time at NDAA. I also enjoy working alongside the Executive Director on Board and Executive Committee planning.

3. **What are 3 words to describe NDAA?**
   Engaging, Innovative, Collaborative

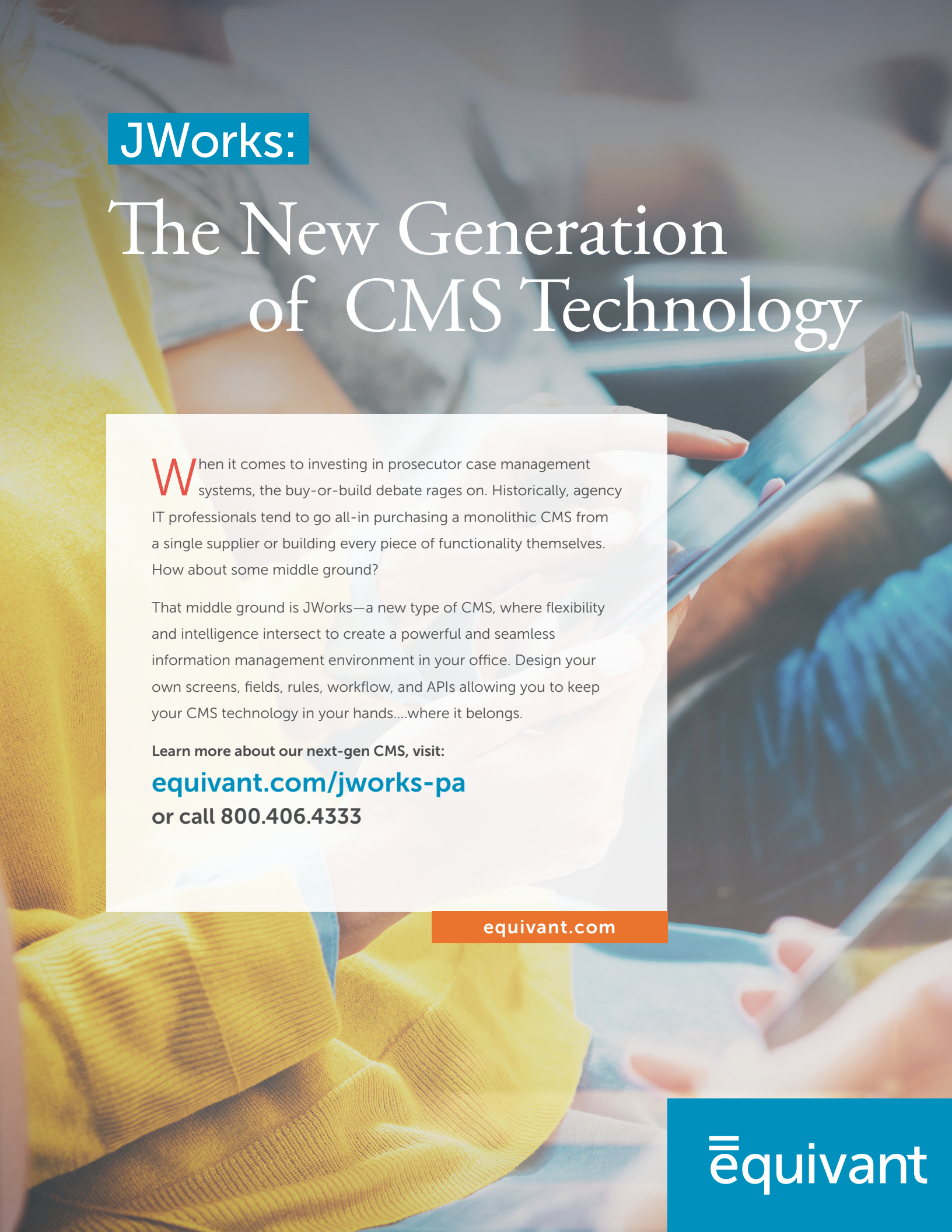
4. **Where is your hometown?**
   South Boston, Virginia

5. **If you could visit anywhere in the world you've never been, where would you go?**
   India (I am a bit obsessed with Bollywood)

6. **If you had to eat one meal, every day for the rest of your life, what would it be?**
   Pizza

7. **People would be surprised if they knew:**
   My favorite genre of music is country

8. **What did you want to be when growing up?**
   Corporate Lawyer



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NDAA's magazine, *The Prosecutor*, is the premiere publication for prosecutors around the country. To make sure that the publication's content aligns with NDAA's mission to be the voice of America's prosecutors, we would like to invite you to contribute content.

For more information, please visit

National District Attorneys Association
1400 Crystal Drive, Suite 330
Arlington, VA 22202
703.549.9222 • 703.836.3195 Fax
ndaa.org