WBASNY

The Women's Bar Association of the State of New York

presents

Convention 2025
Continuing Legal Education Series

Identifying and Managing Conflict to Meet Attorney Ethical Obligations

May 16, 2025
3:00 pm - 4:00 pm

Presenters: Hélène Biandudi Hofer, Esq.
Chenoa Maye, Esq.

Identifying and Managing Conflict as a Means of Meeting Ethics Obligations

Chenoa A. Maye, Esq.
Maye Mediation, LLC

Hélène Biandudi Hofer
Good Conflict, LLC

Learning Objectives

- Understand the neuroscience of conflict and its impact on decision-making.
- Identify internal and external conflicts that affect ethical duties.
- Develop strategies to navigate conflict to uphold courtesy and professionalism.
- Explore resources for continued learning on conflict management and ethics.

Neuroscience of Conflict – Overview

- Amygdala Hijacking: Emotional responses override rational thought.
- Neurochemical Impact: Increased cortisol and adrenaline reduce logical reasoning.

Amygdala Hijacking and Ethical Consequences

https://www.youtube.com/watch?v=aHm3ZKzVP7w - Overview by Sarah N. Wilson

- (Perception of) High-stress situations trigger impulsive decisions.
- Leads to poor communication or unprofessional conduct.
    - Rule 1.4: Duty to communicate clearly and promptly.
    - Rule 8.4: Prohibition on unprofessional conduct.

Identifying Conflict

Internal

- Sources: Ethical dilemmas, stress, cognitive biases.
- Signs: Decision-making difficulties, irritability, disengagement.

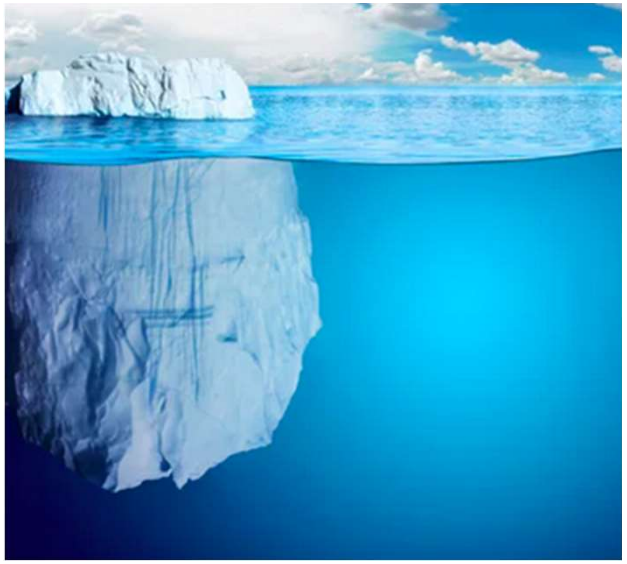
External

- Types: Client disputes, professional conflicts, systemic challenges.
- Indicators: Escalating hostility, miscommunication, dissatisfaction.

The Understory

“Conflict is a window into something underneath,
like an iceberg.”

~ Kyle Dietrich, Peacebuilder



The Understory

- The understory is the thing the **conflict is really about**.

- It's the most **interesting and unexplored** part of a conflict.

- It’s the secret to having **the right fight.**

Common Understories

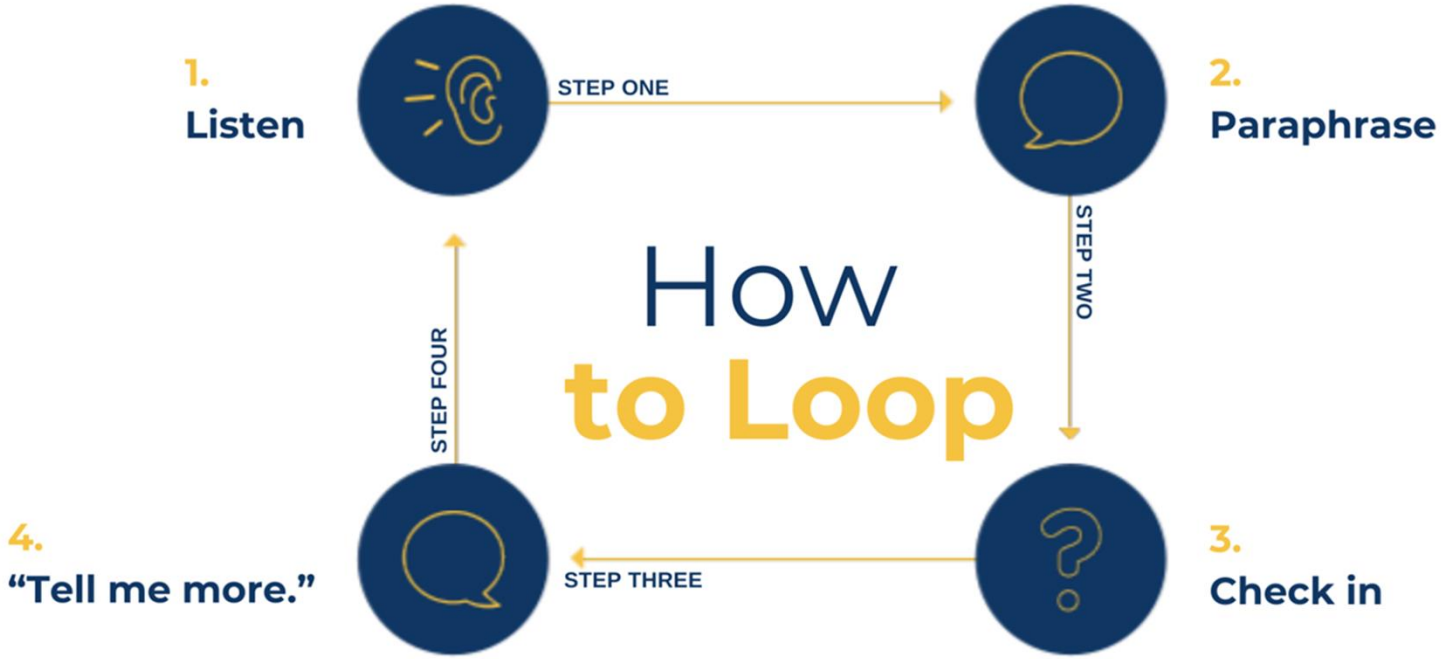
- POWER & CONTROL 
- CLOSENESS & CARE 
- RESPECT & RECOGNITION 
- STRESS & OVERWHELM 

Technique :

Looping

What it is:

Looping is a listening style where you solely focus on the other person's response to your question ***to understand what's most important to them.***



The Scoop on Looping

Looping is a communication technique that transforms how we listen and connect with others. Used by conflict mediators and psychologists, looping gets beneath talking points. By proving we are trying to understand one another, looping builds trust, creates clarity, and invokes curiosity–even amidst profound disagreement.

SOURCE: Looping is a technique developed by Gary Friedman and Jack Himmelstein of The Center for Understanding in Conflict.


What Real Listening (Looping) Actually
LOOKS & SOUNDS LIKE
SMITH WIGGLESWORTH

Managing Conflict (Internal)

- Preemptive: Mindfulness, emotional intelligence.
- Real-Time: Grounding techniques, consulting ethical rules.
- Reflective: Post-event analysis for improvement.

Managing Conflict (External)

- Preemptive: Clear communication, written agreements.
- De-escalation: Active listening, neutral language.
- Third-Party Resources: Mediation, conflict coaches.

Conflict Management Framework

1. Assess: Identify conflict type and severity.
2. De-escalate: Use neuroscience-informed techniques.
3. Resolve: Ensure compliance with ethical rules.
4. Reflect: Learn for future improvement.

Resources for Follow-Up

Good Conflict, LLC

Good Conflict is an organization that helps individuals and communities transform disputes into productive dialogues by integrating insights from neuroscience, conflict mediation, and social psychology. Co-founded by Hélène Biandudi Hofer and author Amanda Ripley, it offers workshops, coaching, and practical tools like the Good Conflict Starter Toolkit and the book High Conflict. Their programs, including an introductory course and a master class, equip leaders and teams with skills to navigate disagreements constructively. Through these resources, Good Conflict fosters healthier conversations, preventing disputes from escalating into division.

Maye Mediation, LLC

Maye Mediation, LLC, led by Chenoa A. Maye, Esq., offers innovative and compassionate dispute resolution services for individuals, families, businesses, and communities. Their offerings include mediation and arbitration to efficiently resolve personal, business, and legal disputes, comprehensive mediator training programs, and facilitated organizational discussions to enhance communication and collaboration. By viewing conflict as an opportunity for growth, Maye Mediation empowers clients with practical tools to address disagreements constructively, fostering understanding and long-term success.

Q&A

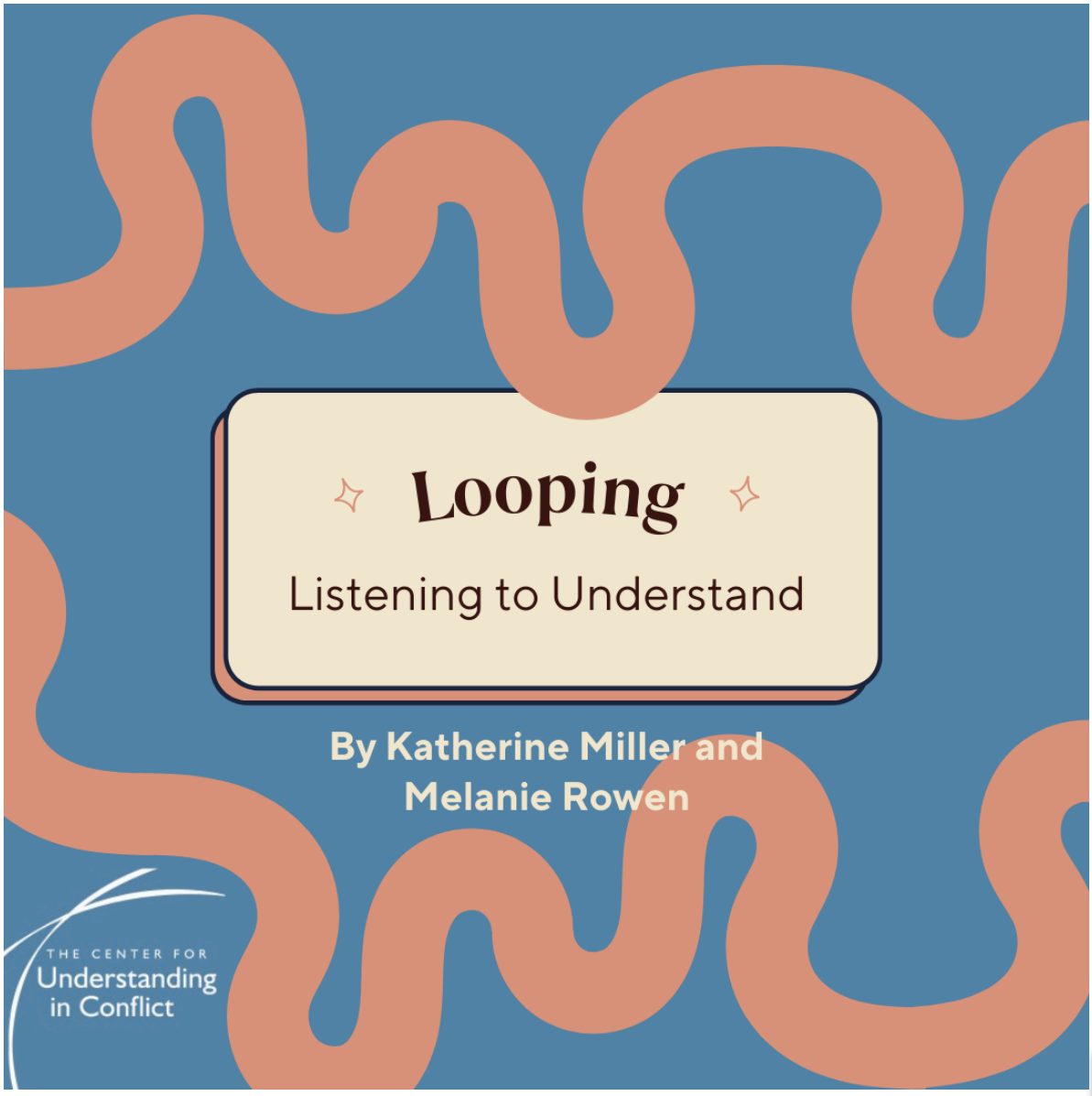
and

Thank You!

844.242.3428 admin@understandinginconflict.org

Looping—Listening to Understand

by | Jul 14, 2021 | Blog



By Katherine Miller and Melanie Rowen

When parties are in conflict, often one of the biggest hurdles for the mediator is to help parties understand the other's perspective. This includes understanding the matters of importance to each person in their conflict. Looping—listening to understand—is one of the most transformative tools in our conflict resolution box and this technique is something that we've incorporated into our everyday lives—professionally and personally. Not only do we loop the parties as mediators, we also teach the parties in conflict to loop each other during the mediation process.

The loop of understanding entails four steps. One person, we'll call them Aiden, loops the other, whom we'll call Nour. Aiden asks Nour questions about how they perceive the situation and what is important to them. Nour then responds, while Aiden's goal is to understand what Nour is saying. Aiden then offers their understanding by sharing what they have

learned from Nour in their own words rather than parroting what has been said. During this process, Aiden observes Nour's reaction. Aiden then checks in with Nour to find out if Aiden's loop was accurate. If not, Aiden then asks Nour to clarify their understanding, which provides Nour an opportunity to share what they believe Aiden has properly understood and elaborate on anything else pertinent to this exchange that has been missed. In turn, Aiden polishes their understanding, and this process continues until both parties are satisfied there is understanding.

Looping is a practice that opens us up to empathy and is relevant in many scenarios when working with others in situations beyond conflict. It provides an opportunity to more deeply understand what is important to other people and why, and allows space to explore the emotions involved. Therapists, journalists, doctors, nonprofit leaders, and others have incorporated this impactful practice into how they work with others.

Want to learn more? Watch our webinar on looping anytime: https://understandinginconflict.org/store/.

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The Challenges and Rewards of Building a Conflict Resolution and Mediation Practice

CALIFORNIA

829 Sonoma Avenue
Santa Rosa, CA 95404
707.582.5186

NEW YORK

145 Huguenot St. – Suite 402
New Rochelle NY 10801
844.242.3428

Defining Civility as an Attorney

Gary L Gassman and Elizabeth Anna Olivera

Jan 21, 2020 13 min read

Summary

- Civility means acting with formal politeness and courtesy when communicating or working with opposing parties, opposing counsel, clients, and outside parties.
- The Model Rules of Professional Conduct touch on civility and govern attorneys' ethical responsibilities in their legal practice.
- The Model Rules specifically endorse zealous advocacy, but attorneys must be careful to not cross the line of incivility.
- Courts have the power to impose sanctions or disciplinary measures to deter inappropriate conduct and incivility within the legal profession.

RunPhoto via Getty Images

The notion of civility is mentioned frequently in multiple different contexts when discussing trends within the legal profession. In law school, law students are taught to follow the ABA's *Model Rules of Professional Conduct* and the ethical obligations that come with taking the oath of professionalism as an attorney. Although often stated, the term *civility* is not defined specifically within any legal statutes or guidelines. This article

According to *Merriam-Webster*, the term *civility* is defined as civilized conduct or a polite act or expression. [1] *Oxford Dictionary* defines the term as "[f]ormal politeness and courtesy in behaviour or speech" or "[p]olite remarks used in formal conversation." [2] These definitions are helpful in understanding the mechanics of the term, but what exactly falls within the purview of acting with civility?

The *Model Rules of Professional Conduct* state general notions that attorneys should be fair to opposing counsel, refrain from engaging in prejudicial conduct toward the administration of justice, and maintain the decorum of the tribunal. [3] In addition, some states and local bar associations have adopted their own standards for civility that are more specific or detailed than the Model Rules. [4] For example, California has adopted *Attorney Guidelines of Civility and Professionalism*, which is a set of voluntary guidelines and goals regarding best practices of civility in the legal profession. [5] The District of Columbia Bar has adopted *Voluntary Standards for Civility* for attorneys to use as a guide for acting with civility in their legal practice. [6] And New York has adopted *Standards of Civility* as well as *Rules of Professional Conduct*. [7]

The most common themes among a majority of state civility codes include

> (1) recogniz[ing] the importance of keeping commitments and of seeking agreement and accommodation with regard to scheduling and extensions; (2) be[ing] respectful and act[ing] in a courteous, cordial, and civil manner; (3) be[ing] prompt, punctual, and prepared; (4) maintain[ing] honesty and personal integrity; (5) communicat[ing] with opposing counsel; (6) avoid[ing] actions taken merely to delay or harass; (7) ensur[ing] proper conduct before the court; (8) act[ing] with dignity and cooperation in pre-trial proceedings; (9) act[ing] as a role model to the client and public and as a mentor to young lawyers; and (10) utiliz[ing] the court system in an efficient and fair manner. [8]

Although the term *civility* is used often, there are some common misconceptions as to what constitutes civility when it comes to conducting business within the legal profession.

First, civility is not the same as simply having good manners. [9] Good manners could be considered a component of acting polite or courteous, but this alone does not constitute acting with civility. It is one thing to be a polite person, but it is another to act politely within the profession when dealing with difficult clients or opposing counsel in an adversarial environment. Although it may be considered uncivil to act with impoliteness, the concept of being polite is not the only component to achieving civility within the profession.

Second, liking someone is not within the purview of acting with civility. Civility is not demonstrated merely by showing amity toward those with whom you interact in your practice. According to author Jayne R. Reardon,

> [c]ivility compels us to show respect even for strangers who may be sharing our space, whether in the public square, in the office, in the courtroom, or in cyberspace. [10]

However, the absence of criticism toward another does not automatically mean that you are acting with civility. [11] It can be argued that attorneys can act with civility as long as they do not vocalize their criticism of another person. Yet, civility is more focused on professionals' conduct than on their negative or critical behavior toward someone else. Therefore, just because attorneys do not have critical thoughts against another does not mean that they are acting with civility.

Finally, attorneys are not necessarily acting with civility just because they are in agreement with others. Rather, "underlying the codes of civility is the assumption that people will disagree." [12] This is further emphasized within the adversarial nature of the legal profession. Opposing parties can act with civility toward one another while disagreeing on

As stated above, many states have adopted their own mandatory or voluntary standards or codes of civility to practice within the legal profession. In addition to these standards, there are ethical obligations that all attorneys must abide by in order to practice law.

Model Rules of Professional Conduct. One of the requirements for becoming an attorney is passing the Multistate Professional Responsibility Examination (MPRE), an exam designed to measure the knowledge and understanding of established standards related to a lawyer's professional conduct. Each state has adopted a minimum score that an aspiring attorney needs to achieve on the exam in order to be admitted to the state's bar.

The MPRE tests, among other things, knowledge of the *Model Rules of Professional Conduct*. The Model Rules are adopted, in one form or another, by each state in order to ensure that attorneys are held accountable for acting in a professional manner. These rules specifically hit the key points and concepts of ethical standards that attorneys must follow within the legal profession.

Although *civility* is not expressly defined, there are some specific rules that pertain to civility among attorneys within the profession. For instance, Rule 3.3 requires an attorney to act with candor toward the tribunal and avoid knowingly making false statements, failing to disclose controlling legal authority, and knowingly offering false evidence. [13] Similarly, Rules 4.1 through 4.4 require truthful communication between parties and opposing counsel and acting appropriately when communicating or dealing with unrepresented or third parties. [14] In addition, attorneys who are supervisory lawyers or partners within a law firm are held to specific standards of conduct under the Model Rules. [15] Overall, these rules touch on civility and govern attorneys' ethical responsibilities in their legal practice.

Zealous advocacy versus acting without civility. In the legal profession, the *Model Rules of Professional Conduct* and any adopted rules or guidelines of civility contain the standards of conduct that attorneys are expected to follow. Because these rules and guidelines are in place, attorneys often violate these standards when trying to act as

> measures are required to vindicate a client's cause or endeavor. A lawyer must also act with commitment and dedication to the interests of the client and with zeal in advocacy upon the client's behalf. [16]

Zealous advocacy is not often a problem for lawyers. As legal advocates, attorneys are inclined to argue for their clients and support these arguments with valid and persuasive legal theories.

However, when advocating on another's behalf, lawyers easily can get caught up in the arguments and zealously try to advocate that their particular point of view is the correct and more reasonable viewpoint. This is where it can become tricky: it is challenging to act as a strong advocate while also acting with civility. The *Model Rules of Professional Conduct* address this problem, although without specifically using the term *civility*:

> A lawyer is not bound, however, to press for every advantage that might be realized for a client. . . . The lawyer's duty to act with reasonable diligence does not require the use of offensive tactics or preclude the treating of all persons involved in the legal process with courtesy and respect. [17]

Although these rules are informative, the question that remains is this: "What are the limits of zealous advocacy?" In other words, what are the indications that counsel has gone too far in challenging a court's ruling or an opponent's position?

The Model Rules, as mentioned, offer no specific definition of or standards for civility within the legal profession, but they do offer some guidance on the line between zealous advocacy and failing to act with civility. For example, Model Rule 3.4 states that an attorney should act with fairness and courtesy to opposing parties and counsel by not unlawfully obstructing access to evidence, not falsifying evidence, not knowingly disobeying obligations under the rules of the court, and not making frivolous discovery

zealous advocacy that is tempered and reasonable and attorneys who are difficult, rude, inconsiderate, overly critical, condescending, or standoffish. Attorneys who are perceived as kind, bright, considerate, and reasonable while being zealous advocates will reap the benefits of such conduct with their reputation in the legal community and at the courthouse.

Consequences for Acting without Civility

Acting with civility as an attorney is an important and essential part of the job. In fact, in multiple states, judges are inclined to give various sanctions to attorneys who clearly act without civility or professionalism. These sanctions are meant to deter this type of behavior within the profession.

Misconduct under the Model Rules. Although civility is not mentioned explicitly in the *Model Rules of Professional Conduct*, Model Rule 8.4 outlines what constitutes professional misconduct. [19] Actions that constitute misconduct include violating the Model Rules, committing a criminal act, engaging in conduct that counts as discrimination or harassment, engaging in dishonesty or deceit, and engaging in conduct that is prejudicial to administrative justice. [20] Additionally, it is considered professional misconduct for lawyers to state or imply that they have the "ability to improperly influence a government agency or official to achieve results that violate the [Model Rules]" and for lawyers to help a judge in conduct that breaches judicial conduct rules. [21] Although these are the listed actions that constitute misconduct, judges and state bars may deem it necessary to give sanctions or take disciplinary measures for actions not specifically listed within this rule or any of the Model Rules.

Examples of sanctions. Courts recognize the importance of practicing civility within the legal profession, and courts in every jurisdiction have the power to impose sanctions or disciplinary measures to deter inappropriate conduct and incivility within the legal profession. A few recent examples of sanctions granted for incivility vary from purely monetary sanctions to suspension from the practice of law.

attorney frivolously made 600 objections in one deposition. [23] There, the judge recognized that the plethora of objections during this deposition was an unnecessary waste of time and resources for all parties involved. And in Illinois, a U.S. district judge imposed sanctions that included not only payments but also mandatory anger-management training when an attorney made false accusations and carried out an unhinged attack on an expert witness. [24]

Beyond monetary sanctions, there is a more severe sanction that judges could impose on attorneys for acting with incivility: suspension. For example, in one recent instance, the New York Appellate Division, First Department, panel issued a four-month suspension from the New York Bar and one year of mandatory counseling for a prominent real estate attorney who acted with "inappropriate litigation behavior" on multiple occasions. [25] In Florida, the supreme court ordered a two-year suspension for an attorney's rude and antagonistic behavior throughout a civil case. [26] Although some argued that this was a severe punishment, the Florida Supreme Court noted that the attorney committed multiple violations of the state's rules of professional conduct and acted unprofessionally and inappropriately on several occasions. In another case, the Supreme Court of South Carolina imposed a 90-day suspension and required the violating attorney to complete a legal ethics and professionalism program due to his uncivil and unprofessional behavior. [27] In this instance, after multiple warnings about incivility, the Supreme Court of South Carolina felt that the attorney needed to be reprimanded for his uncivil actions.

These are just some of the multiple examples of judges and state bars acting to prevent incivility within the profession. These sanctions are created to prevent inappropriate and unprofessional behavior among lawyers. With the potential for sanctions in mind, it is important to act strategically with civility and professionalism when serving as an advocate and counselor. Attorneys need to think about the consequences of their actions when representing themselves, their law firms, and their clients.

Sanction review. The New York Supreme Court, Appellate Division, often reviews decisions made by the referee of a Sanction Hearing to determine whether the sanctions or disciplinary measures administered were appropriate under the circumstances. The

There are numerous examples of the Supreme Court of New York analyzing the decisions made by the Attorney Grievance Committee and referees of the ensuing Sanction Hearings in order to ensure that the proper sanction is given for misconduct. [29]

For example, in *In re Zappin*, the court affirmed the referee's order to disbar an attorney who continuously violated multiple rules of professional conduct and performed egregious acts of misconduct over a four-year period. Some of these actions included

> his repeated acts of domestic violence toward his wife; his false testimony at the custody trial; his introduction of falsified evidence in the form of altered text messages; his presentation of misleading testimony through his expert witnesses; his flouting the directives of three judges; his setting up of a fake website about the attorney for the child in the custody action and posting derogatory messages about her on it. . . . [30]

The court in this case believed that it was appropriate to order the attorney to be disbarred according to the guidelines and disciplinary precedent set in the jurisdiction.

In *In re Giorgini*, the court reevaluated the public censure sanction and determined that the attorney's sanction should be a three-month suspension instead. [31] In this case, multiple counts were evaluated by the court, the Attorney Grievance Committee, and the referee for the Sanction Hearing. [32] The court ultimately concluded that a more severe sanction was necessary due to the attorney's specific misconduct. [33]

However, courts also understand that the severity of disciplinary sanctions must be appropriate and reasonable for the identified misconduct. In *In re Steinberg*, the panel of judges denied the suggested two-year suspension for an attorney in conformity with precedent within the jurisdiction. [34] In this case, the respondent, Jonathan Steinberg, was sanctioned two times prior for frivolous litigation conduct and sending an inappropriate ex parte email to a judge presiding over one of his cases. [35] Although he

for misconduct. [37] The court held that the actions performed by the attorney in British Columbia did not constitute misconduct that required more severe sanctions than a public censure in the New York jurisdiction. [38]

These cases exemplify the analysis that courts use to administer the most appropriate sanctions or disciplinary actions for practicing attorneys. It appears that the goal for courts in this jurisdiction is to deter inappropriate behavior without imposing sanctions that would be too severe for the misconduct performed.

Conclusion

A lawyer's professional conduct goes hand in hand with that lawyer's reputation for excelling in practice. In today's world, "one uncivil outburst may haunt an attorney for years; and reputations may be built and destroyed quickly." [39] Clients and others notice a lawyer's communication style and respect for the client, other parties and lawyers, and the court—and any person who has contact with a lawyer can comment on that lawyer's performance and professionalism through social media forums or on websites that specifically rate and rank attorneys. Research shows that lawyers who exhibit civility and professionalism get higher ratings and are viewed as more effective lawyers. [40] Thus, incivility, in all likelihood, will have an adverse effect on a lawyer's reputation and, ultimately, that lawyer's livelihood. Accordingly, all lawyers should refocus some of their efforts on increased civility in the profession.

Lawyers should think about the meaning of civility and practice the old adage of treating others how they would want to be treated. Today's world facilitates greater client influence and requires increased transparency from lawyers. Thus, civility and demeanor are more important than ever in building relationships, credibility in legal practice and the courtroom, reputations, and job satisfaction—and, of course, in avoiding disciplinary measures. Civility and professionalism are required in the legal profession, but lawyers also should embrace such behavior because it is the right thing to do and can help to reignite not only the quality of service and justice that should be expected but also the

2. *Civility*, Oxford Dictionary, https://en.oxforddictionaries.com/definition/civility (last visited Apr. 4, 2019).

3. *Incorporating Civility into Your Law Practice*, FindLaw, https://practice.findlaw.com/practice-guide/incorporating-civility-into-your-law-practice.html (last visited Apr. 17, 2019).

4. *Id.*; *see also Professionalism Codes*, American Bar Association (last updated Mar. 2017) (listing specific civility standards by state), www.americanbar.org/groups/professional_responsibility/resources/professionalism/professionalism_codes.

5. State Bar of Cal., Civility Toolbox (2009), www.calbar.ca.gov/Portals/0/documents/ethics/Civility/Atty-Civility-Guide-Revised_Sept-2014.pdf (last visited Apr. 17, 2019).

6. *Voluntary Standards for Civility*, D.C. Bar, www.dcbar.org/bar-resources/legal-ethics/voluntary-standards-for-civility (last visited Apr. 17, 2019).

7. N.Y. State Unified Court Sys., Rules of Professional Conduct and New York State Standards of Civility (May 1, 2013), www.nysba.org/WorkArea/DownloadAsset.aspx?id=55797 (last visited Apr. 17, 2019).

8. Donald E. Campbell, *Raise Your Right Hand and Swear to Be Civil: Defining Civility as an Obligation of Professional Responsibility*, 47 Gonz. L. Rev. 99, 109 (Nov. 2, 2011).

9. Jayne R. Reardon, *Civility as the Core of Professionalism*, American Bar Association (Sept. 19, 2018), www.americanbar.org/groups/business_law/publications/blt/2014/09/02_reardon.

10. *Id.*

11. *Id.*

12. *Id.*

13. Model Rules of Prof'l Conduct r. 3.3 (Am. Bar Ass'n 2016).

19. *Id.* r. 8.4.

20. *Id.*

21. *Id.*

22. Joe Mullin, *Judge Sanctions Lawyer for Splashing Opposing Counsel with Iced Coffee*, ARS TECHNICA (Jan. 30, 2017), https://arstechnica.com/tech-policy/2017/01/tech-startups-lawyer-sanctioned-for-throwing-coffee-during-deposition.

23. Debra Cassens Weiss, *Judge Sanctions New York City After Lawyer Makes 600 Objections in One Deposition*, A.B.A. J. (May 17, 2017), www.abajournal.com/news/article/judge_sanctions_city_for_lawyers_plethora_of_deposition_objections.

24. Debra Cassens Weiss, *Lawyer Is Sanctioned $50K for Alleged 'Inappropriate Diatribes' and 'Unhinged Attack' on Expert*, A.B.A. J. (Mar. 29, 2018), www.abajournal.com/news/article/lawyer_is_sanctioned_50k_for_alleged_inappropriate_diatribes_and_unhinged_a.

25. Jack Newsham, *First Department Suspends Adam Leitman Bailey for 4 Months*, N.Y. L.J. (Apr. 2, 2019), www.law.com/newyorklawjournal/2019/04/02/first-department-suspends-adam-leitman-bailey-for-four-months.

26. Samson Habte, *Lawyer's 'Appalling' Incivility Warrants Tougher Sanction Than What Bar Sought*, BNA (Nov. 20, 2013) (subscription-only access available on the Bloomberg Law website).

27. G.M. Filisko, *You're Out of Order! Dealing with the Costs of Incivility in the Legal Profession*, A.B.A. J. (Jan. 1, 2013), www.abajournal.com/magazine/article/youre_out_of_order_dealing_with_the_costs_of_incivility_in_the_legal.

28. *In re* Zappin, 160 A.D.3d 1, 7, 73 N.Y.S.3d 182, 186 (App. Div. 2018) (quoting N.Y. COMP. CODES R. & REGS. tit. 22, § 1240.8(b)(1)).

29. *See, e.g.*, *id.* at 7, 73 N.Y.S.3d at 187; *In re* Foo, 159 A.D.3d 1218, 1219, 72 N.Y.S.3d 249, 250 (App.

34. *Steinberg*, 167 A.D.3d at 211.

35. *Id.* at 207–08.

36. *Id.* at 210–11.

37. *In re* Foo, 159 A.D.3d 1218, 1219, 72 N.Y.S.3d 249, 250 (App. Div. 2018).

38. *Id.*

39. *See* Reardon, *supra* note 9.

40. *Id.*

Authors

Gary L Gassman
Cozen O'Connor

Gary practices in the areas of insurance coverage counseling and litigation with a concentration on D&O liability,

Elizabeth Anna Olivera
Cozen O'Connor

...

Published in final edited form as:
Biol Psychiatry. 2010 June 15; 67(12): 1117–1119. doi:10.1016/j.biopsych.2010.04.027.

Amygdala Activity, Fear, and Anxiety: Modulation by Stress

Kerry J. Ressler, MD, PhD
Howard Hughes Medical Institute, Department of Psychiatry and Behavioral Sciences, Center for Behavioral Neuroscience, Yerkes National Primate Research Center, Emory University School of Medicine

Over the last approximately 30 years, the neuroscience community has made terrific strides in its understanding of the small region in the temporal lobe named for its peculiar almond shape, the amygdala. This area now provides among the best examples of how neural circuits control specific behaviors. In terms of our depth of understanding of its afferent and efferent connections, the role of incoming signals in modulating emotion-related behavior, and the functional and anatomical results of its projection patterns, the detailed understanding of the amygdala is unsurpassed. Examination of these functions has allowed great progress in dissecting the neural circuitry of emotion regulation. It is involved in many processes, including appetitive behavior (such as affiliation, sex, and drug abuse), but its role as an integral part of the fear circuitry may be the most fully described [1–3]. Recent work in two manuscripts in this issue of Biological Psychiatry, add to our understanding of the breadth of amygdale function, and in particular, how chronic stress may affect amygdala processing, and conversely how amygdala-mediated defensive behaviors may help protect against stress.

The amygdala is comprised of at least 13 different subnuclei, the most clearly defined of which are the central (CeA), the basal (BA) and lateral (LA) nuclei (see Figure). The CeA regulates many aspects of the fear response, including regulation of the release of cortisol through the paraventricular nucleus of the hypothalamus, increase in startle response via the midbrain, and modulation of the autonomic nervous system through the lateral hypothalamus [2]. Lesions of the CeA eliminate fear conditioned responses, such as fear-potentiated startle and freezing [1] in rodents. Thus the CeA can be thought of as the primary output or effector region. The LA and BA are involved in the learning or associative processing within the amygdala. In particular, the LA receives projections from auditory and visual areas, and is thought to be a principal locus for associations between previously neutral conditioned stimuli (CS) and aversive, e.g. shock or trauma, unconditioned stimuli (US), resulting in the acquisition of conditioned fear. The BA receives some direct CS and US pathways, but is also a target area for further processing of information from the LA prior to sending CS-US information to the CeA.

Studies have also found that the amygdala modulates the fear response in humans. Fearful stimuli including fearful faces, fear inducing images, and fear conditioned cues, have been found to activate amygdala in several brain imaging studies using positron emission tomography (PET) and functional magnetic resonance imaging (fMRI) [3–5]. In a recent

Disclosures: Within the last two years, Dr. Ressler has received awards and/or funding support from Burroughs Wellcome Foundation, NARSAD, NIMH, NIDA, and is a cofounder of Extinction Pharmaceuticals for NMDA-based therapeutics.

review of 55 imaging studies of the functional neuroanatomy of emotion, 25 studies found amygdala activation to fearful stimuli while 4 studies found activation to positive stimuli [5]. To complement the imaging work, it has been demonstrated that temporal lobectomy patients with resulting amygdala loss have impaired fear-conditioned startle [6]. Together, these findings indicate that the amygdala plays an extensive role in regulating the fear response in humans as well as animals.

Posttraumatic stress disorder (PTSD) appears to combine aspects of both severe stress responsiveness and either enhanced conditioned fear or an inability to extinguish, or inhibit, conditioned fear. Notably, many neuroimaging studies have demonstrated that patients with PTSD have greater amygdala activation compared to controls [7]. PET studies using combat scripts [8] and images [9,10] as well as single proton emission tomography (SPECT) studies comparing combat sounds to white noise [11] have all found greater levels of amygdala activation in subjects with PTSD. Similarly, recent fMRI studies have found that even the presentation of trauma-relevant words increase amygdale activation in PTSD cohorts [12]. Notably, this increased fear response extends beyond trauma-specific imagery, with fearful faces activating the amygdala in subjects with PTSD more than in controls [13,14]. These and other clinical data examining the neural substrates of PTSD suggest that it is a disorder of enhanced stress responsiveness combined with dysregulation of fear and its inhibition.

Many rodent models of PTSD combine either chronic or acute stress with fear conditioning [15–17]. However, there is not yet a consensus on the relative validity and specificity of some of the different model systems. An ongoing and critically important question for the field is how stress, both acute and chronic, regulates fear conditioning. Notably, chronic stress, and anxiety-related behaviors from chronic, unpredictable stress are thought to be more related to functioning within the bed nucleus of the stria terminalis (BNST) than the amygdala [18]. The BNST shares many projection targets with the nuclei of the amygdala, and has reciprocal connections with the amygdala. It is out of the scope of this commentary to review BNST function and projections, but see recent review [19]. Although not examined within the current studies, the role of the BNST in the stress-related phenotypes is surely an area of active interest for future examination.

The new work by Rosenkranz and colleagues, “Chronic stress and amygdala neuronal dysfunction” directly addresses how chronic stress may interact with amygdala function and amygdala-related behaviors. They first demonstrate that chronic stress increases fear, measured with conditioned freezing – a robust, and easy to quantify readout of amygdala-mediated fear. Using electrophysiological examination of acute amygdala slice preparation, they then demonstrate that this same chronic stress procedure enhances neural excitability within LA circuits. After demonstrating the association between chronic stress amygdala activity, they examine possible molecular mechanisms that may underlie this effect, finding that chronic stress reduces a specific potassium (K+) channel-dependent regulation of action potential firing. Since K+ channels are normally inhibitory, and serve to hyperpolarize the neuronal membrane following an action potential, a decrease in K+ channel inhibition effectively facilitates LA excitability. Together these interesting findings suggest that chronic stress increases emotional responding including fear and anxiety responses, in part through the local effects on amygdala neuron excitability mediated by K+ channel function. These local effects within the amygdala are likely to lead to an over-active fear and anxiety related circuit and to decrease the ability of other areas involved in fear inhibition, e.g. hippocampus and medial prefrontal cortex, to dampen amygdala output.

Another question of great importance is how separate amygdala regions may differentially mediate separate fear-related behavioral outputs. For example Pavlovian conditioned fear responses support a range of defensive behaviors, such as freezing, fear-potentiated startle,

aggression, and avoidance. Active avoidance, while sometimes detrimental (in that avoidance can impede extinction of fear), may also be protective. These questions are examined in the study by Lazaro-Munoz and colleagues, “Sidman Instrumental Avoidance Initially Depends on Lateral and Basal Amygdala-Mediated Pavlovian Processes.” They note that the LA and BA are critical for the acquisition of instrumental avoidance learning, but the CeA is not. After a number of repetitions, well-trained active avoidance responses become LA- and BA-independent, while continuing to be CeA-independent. Lesions of CeA abolished freezing and rescued avoidance behaviors. This suggests that an intact CeA actually constrains avoidance behaviors, possibly by inducing Pavlovian responses, such as freezing, that compete with the performance of active avoidance. Together, their findings reinforce prior observations that fear activates multiple possible behavioral outcomes. They propose that active avoidance in particular may lead to less long-term negative stress effects, and thus in some cases serve as an active and productive coping style, by minimizing re-exposure to fear- and stress-inducing stimuli, compared to reactive and passive defensive behaviors, such as freezing. Although it is premature to know how parallel this is in humans, one wonders if the psychological sense of being ‘frozen’ with fear and anxiety is a similarly passive and chronic stress-inducing process as physical freezing is in rodents. If so, engaging alternative coping approaches, such as active avoidance and other active coping strategies, likely through cortical and other interacting areas with the amygdala, are likely to lead to decreased stress activation and improved psychological function.

In summary, there have now been decades of work examining mechanisms of amygdala function and how these functions, coupled with known output pathways may mediate emotion related behavior. This area of neuroscience has advanced rapidly and carries with it significant translational insight because the mammalian amygdala and many of its connections are highly conserved across species. Thus, the new studies outlined here, which combine neural circuitry, neurophysiology, molecular biology and behavior, are particularly compelling. We are in exciting times, and it is hoped that continued functional dissection of amygdala-relevant pathways, across preclinical and clinical studies, will facilitate increasingly detailed clarification of how neural circuits create and modulate behavior. Through such work, novel and robust prevention and treatment strategies may be closer at hand to help those with debilitating fear- and stress-related psychopathology.

Acknowledgments

This work was primarily supported by National Institutes of Mental Health (MH071537) and the Burroughs Wellcome Fund.

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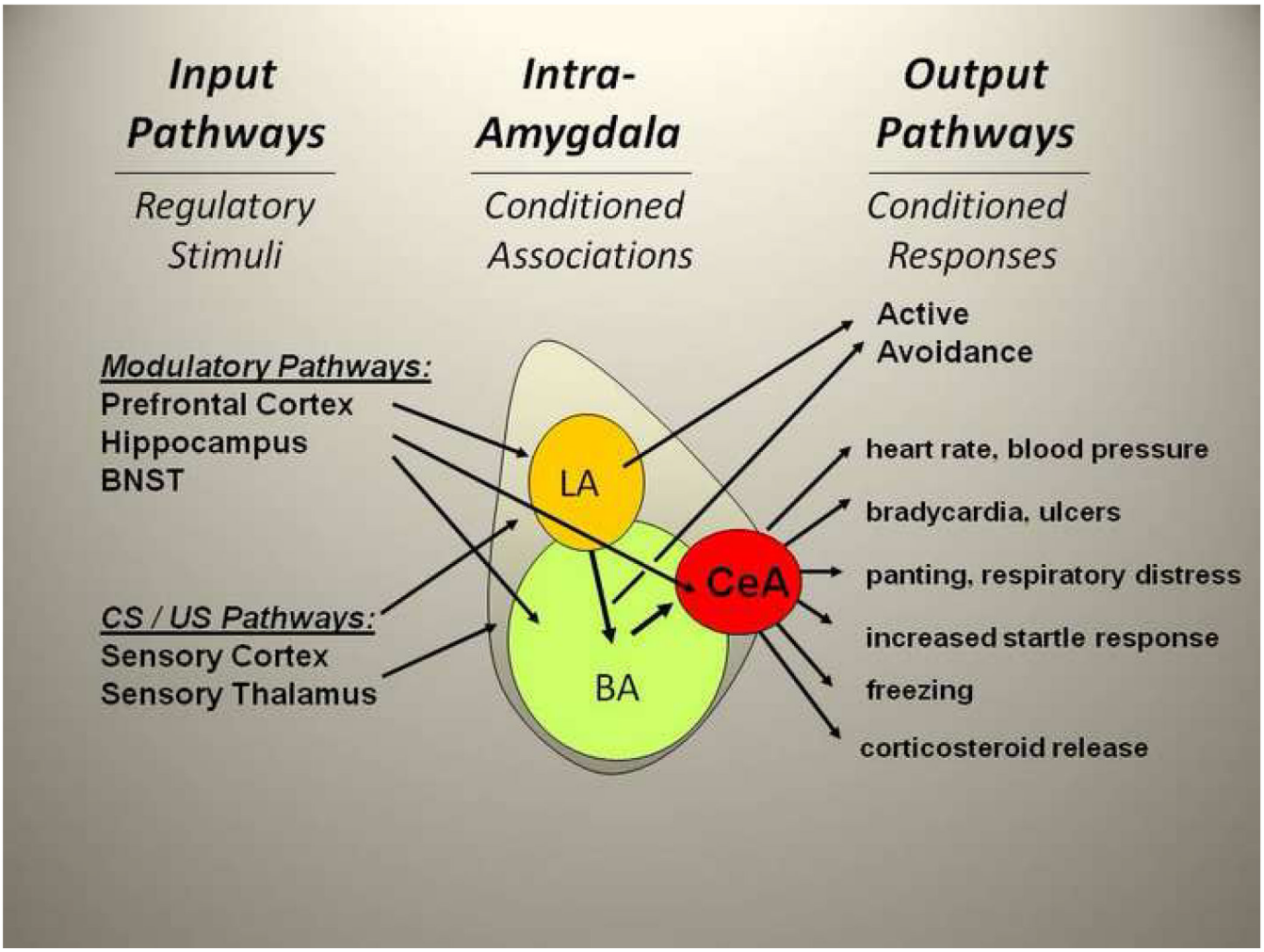

Figure 1. Amygdala Circuitry and the Fear Response

Input, intra-amygdala, and output projections are shown schematically. **Input pathways**: these include connections with areas that mediate conditioned (CS) and unconditioned stimulus (US) pathways such as sensory cortical and thalamic areas, as well as areas that modulate stress-dependent effects on amygdala activation (e.g. bed nucleus of the stria terminalis (BNST) and prelimbic prefrontal cortex). Other areas may be involved in inhibiting amygdala activity and extinction of fear responses (e.g. infralimbic prefrontal cortex and hippocampus). **Intra-Amygdala** pathways: these include the projections from lateral amygdala (LA) and from LA and basolateral amygdala (BA) to the central amygdala (CeA). The LA and BA regions are involved in associative CS-US pairings as well as outputs to the CeA and other extra-amygdala areas which control avoidance and other behaviors. **Output pathways:** include projections to brainstem, hypothalamic, and cortical areas mediating fear and other emotional responses.