

CAOCL-TECOM Resilience Research Project

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Abbreviations

BOC	Basic Officer Course
IA	Immediate Action
CAOCL	Center for Advanced Culture Learning
DI	Drill Instructor
MCRD PI	Marine Corps Recruit Depot Parris Island
OCS	Officer Candidate School
POI	Program of Instruction
RMT	Religious Ministry Teams
SOI	School of Infantry
SDI	Senior Drill Instructor
SI	Sergeant Instructor
SPC	Staff Platoon Commander
SSP	Scout Sniper Platoon
TECOM	Training & Education Command
USMC	United States Marine Corps

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Executive Summary

Resilience Work

Resilience is the outcome of Marines using conceptual resources, including social values, to *craft* balances among real or imagined commitments in their lives. Resilience can be about solving problems, like how to be a good Marine and a good dad even when the two commitments are pulling you in different directions. As the Marines we interviewed in this study point out, however, what counts as a good Marine and a good father can and will vary among Marines, depending on the context and the issue. Although there is a strong, distinctive way of talking in the Marine Corps that makes combat—infantry combat in particular—a central focus, the *kinds* of operational stressors a Marine in the 5900 family of MOSs encounters can be very different than those encountered by a Marine in the 0300 family. Similarly, a Marine who grew up in a context without a father may have absolutely no conception of being a father, no less how to be a good one.

Being resilient therefore is about acquiring concepts on the one hand, and then having the judgment to use those concepts to handle the tensions of being a Marine, across situations and through time. Importantly, these tensions occur in a cultural setting that continually challenges Marines to demonstrate either striving toward or achievement of peak performance. One such tension might be holding oneself accountable for the best possible preparation for combat, but then having the concept that despite the best possible preparation some Marines might be lost in combat as well as the good judgment to use that concept should some Marines die. Committing to bringing home all your Marines is one thing, committing to bringing them all home *alive* is a different matter entirely.

The point here is that the particular character of resilience work in the Marine Corps has to do with the continual pursuit of achieving Corps ideals even as Marines balance that pursuit with realistic judgment. Failure in this balancing act can lead to self-denigration or self-destruction by way of guilt, shame, fear, disgust and so on. Ultimately, resilience is something Marines *do* over time, dynamically and differently depending on the situation. While the time and scope of this project limited our focus to successfully resilient Marines, what we found was confirmation that most Marines are highly accomplished craftsmen in

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this regard: they use flexibility to craft balances between the call to strive for the ideal 24/7/365 and the reality that achieving the ideal is impossible.¹

Since resilience is a Marine craft or practice, it is personal, social, dynamic, and conceptual. Thinking about it in terms of either a bio-physiological process or a psychological trait are mistakes, although the former are implicated in important ways.² Both of these ways of understanding resilience ignore or mislocate the actual cause of *both* stress and resilience: Marines use their bodies; bodies do not use people.³ The point is that it is not the Marine's physiology or psychology but the Marine him or herself as a person that is the proper location for examining stress and resilience. This principle means that attempts to "measure" resilience as a psychological trait or as the amount of cortisol in a Marine's blood are misguided. Such measurements can only ever be secondary to the appropriate primary concern, which is how and why Marines strive to be a "good" Marine, father, sister, community member, friend, financial planner, and so on in the face of human realities. Therefore, drug therapies and deep breathing exercises, while important, can never be ends in themselves.⁴

The primary existential commitment for Marines—what they live and die for—is the Corps and other Marines. The Corps would like all Marines to be *absolutely steadfast* in this commitment. Both steadfastness and flexibility are usually good, but they are not equal in the Corps.⁵ The Corps is a warfighting organization whose operations have lethal consequences. The Corps demands absolute steadfastness for this reason. But Marines are

¹ If achieving ideals were possible, they would be goals, not ideals. It is striving *despite* the inability to achieve the ideal that makes such striving heroic, at least in Western and American culture.

² For example, this article in The Economist <http://www.economist.com/news/science-and-technology/21566612-it-may-be-possible-vaccinate-soldiers-against-trauma-war-battle-ready> presents exactly the wrong way to conceive of and research stress in human beings.

³ In their pursuit of their ideals, Marines often creatively construct ways to challenge each other to demonstrate their commitment and courage—in short they stress themselves and each others as a way to "keep sharp" or to test readiness. Sometimes these challenges are misjudged, ill-conceived, or improperly guided and so generate a negative rather than positive result. An example would be uniform inspections conducted too frequently.

⁴ The exception to this principle is found in cases where bio-physiology is actually *broken*, for example in the destruction of brain tissue by a penetrating wound. Even then, some such wounds are worse than others. The damage may be an obstacle to being the kind of Marine the person wants to be rather than an actual blockage.

⁵ Steadfastness can be bad when it becomes steadfast commitment to denigrating oneself for failing in the achievement of an ideal. For example, a Marine platoon sergeant refusing to "let go of" the vision of himself as a failure for not bringing all his Marines home *alive*. Striving to bring home all one's Marines is one thing, judging oneself as lacking for failing to bring them all home alive from a war zone is an ideal.

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also human persons with, at times, the good and appropriate intention of being steadfastly committed to values that do not necessarily align with the Corps', for example, a commitment to family or friendship. Multiple value commitments, and striving for ideal commitment, often lead to endemic value conflicts among Marines.

Marines can and do learn concepts, strategies, and judgment toward being *flexible* as a result but the Corps' cultural expectation is that Marines marshal flexibility in the service of steadfastness. Practically this can translate into a perhaps unnecessary *imposition of flexibility* on relationships or experiences that do not neatly fit into the Corps' culture. For example, a young Marine whose young wife is unhappy with amount of time he spends with her might say that she ought to suck it up because she knew what she was getting into when she married him. Similarly, a Marine attempting to come to grips with the meaning of having shot civilians in a vehicle that did not stop as it approached a checkpoint might expect of himself the ability to simply put the experience out of his mind thus enabling him to get on with his mission.

Ultimately, these dynamics and value-orientations place Marines "in the yellow" in terms of the Combat Operational Stress Continuum (COSC) color coded zones. That is, the typical reality even for successfully resilient Marines is to be reacting to and living with stress even as they flex in order to meet the Corps' demand for steadfastness.⁶ "Deepening the green" is not an actual goal for Marines but an ideal to be striven for. Interestingly, however, to achieve this ideal would be to render the Marine very un-Marine-like in light of the current cultural practices noted above.

The concepts, judgment and dynamics of stress and resilience are prime areas in which the Corps can make a substantive difference for Marines. The Corps can provide training in concepts and judgment to prepare Marines to recognize and balance out their commitment to strive for absolute steadfastness with flexibility. It can give them examples of when the cultural call to continuously strive for the ideal may not be contextually appropriate, such as fixing a complete stranger's collar on a commuter train while on boot leave. We found

⁶ Marines will often create new ways to stress themselves in order to practice being resilient! We found this practice to be focused mostly on preparing for combat, but an obvious institutional and formal version of this practice is the structure and content of recruit training.

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that good Marines are already practicing such flexibility locally and so our suggestion here is not about institutionalizing lower expectations. Rather, we recommend identifying and sanctioning where possible those leadership practices that are already being deployed (see see p. 22 for more detail).⁷

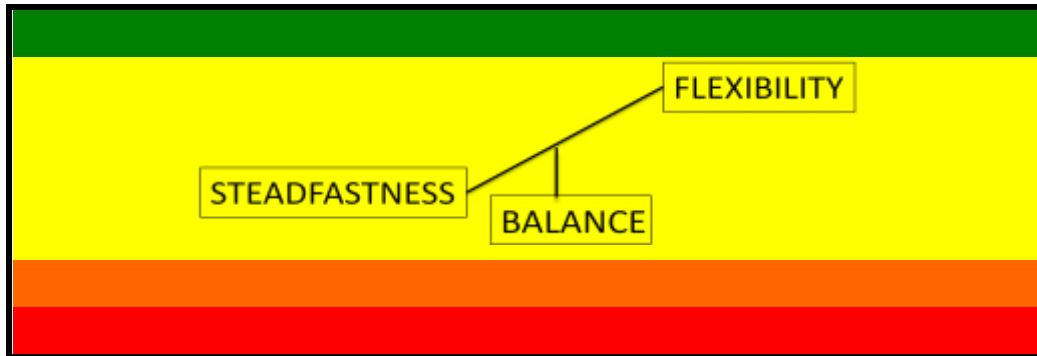


Figure 1. Resilience work as a livable balance between being steadfastness and flexibility, set against the Combat Operational Stress Control (COSC) continuum. Marines are almost always in the yellow because they are constantly striving for an ever-upward progress in terms of prized Corps and personal values. Ultimately the Corps wants Marines to marshal flexibility in the service of steadfastness.

Stress

Marines “stress out” in many ways. One of the most important is their concern about what kind of person they are—what kind of parent, spouse, believer, and most of all, what kind of Marine. Stress isn't about seeing someone killed, or killing, *per se*, as if the event or action “breaks” or “damages” the Marine’s bio-physiology or psychology. It is about *who* you killed, or *how* they were killed. It is about issues like feeling shame over a friend's death especially if you cannot reconcile being a good Marine with the reality of losses in combat, or guilt over having killed if you struggle to reconcile being a good Marine with your faith.

As an illustrative example, one major told us about the dread he felt when he learned that an IED-based ambush of his convoy was written up in a popular book. His fear

⁷ There are certain practices that we would not recommend officially sanctioning because to formalize or institutionalize the practice could kill it or generate negative 2nd or 3rd order consequences. That is, formalizing performance measures could eviscerate the flexibility that the practice is designed to deliver. For example, the practice of some senior drill instructors in sending novice third hats to the laundry to enable them to recover from extreme physical exertion. The SDI is making the resilience of the third hat possible, *but* the ability to send a particular third hat to the laundry—or not—and how often also appears to be a critical way of communicating feedback to the third hat about whether his or her performance is meeting the mark. To state a minimum number of laundry breaks owed to third hats would be to remove the SDI’s flexibility to enable the flexibility of third hats as a way to monitor and guide performance.

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was that a fellow Marine—someone he saw as qualified to judge—would judge him as a failure. He told us that if the book had been an "indictment on how I reacted or responded, I don't think I would have recovered from it." The "boom" here is not the IED itself, but rather the meaning of the entire social experience of the event. The meaning of the event for this Marine was constituted by the fear that he would be found wanting as a Marine. We note, however, a dual unreasonableness in his outlook. By all accounts—the Major's peers, his subordinates, the author of the book—he was and continues to be a superb Marine and leader. His fear then only makes sense if the standard he uses is an unreasonable one: perfection. Second, this Marine constructed an absolutist expectation for his options should he be found wanting in one combat event: life would not be worth living either as a Marine or perhaps as a person.

Notice here a critical Marine cultural practice: holding oneself accountable for achieving the ideal, not just striving for it. That this Marine was wobbly and confused immediately after the explosion is a reality that he thought might be irrelevant to his fellow Marine's judgment and his own expectation of an either/or outcome in the event of the judgment. Marines like Sgt. "Eddie" Wright, who instructed fellow Marines in putting tourniquets on his arms after having them blown off by an RPG and then leading his Marines through the ambush they were in, presents a concrete example of how physical reality does not really count in being a Marine. That is, contrary to our realistic expectations, Wright neither went into psychological shock—rolling around screaming on the floor of his Humvee—nor biological shock—a rapid rise in heart-rate accompanied by a drop in blood pressure. Many Marines adopt this outlook and so, in a sense, being wobbly and confused after being caught in an IED explosion demonstrates some sort of weakness or character flaw! This is a way of judging performance expectations that appears unique to the Marine Corps and plays directly into how Marines conceive of stress as opposed to, say, civilians.

Our major observations on stress:

- **Not Physical or Mechanical.** Nothing like "stress" on a bone or an I-beam to be discovered through measuring galvanic skin responses.

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- **Conceptual and a Choice.** If a Marine doesn't understand they "should" be stressed over something, they won't be. Some Marines choose not to be stressed over things most Marines do (e.g. doing poorly on graded events like tests at schools or PFTs).
- **Variable from Marine to Marine, and Over Time for Individual Marines.**
- **Distress (hindering stress):** when Marines feel unprepared—an obstacle.
- **Eustress (motivating stress):** when Marines feel prepared or trained—a challenge.
- **Context Dependent.** Stress at MCRD PI is different than stress while forward deployed; what's stressful on the job at School of Infantry (SOI) is different than stress in the home.
- **Learned Socially.** Marines learn what counts as stress through the official discourse of the Marine Corps, but also locally within their community.
- **Existential.** Stress isn't about survival—Marines willingly expose themselves to risk for the sake of other Marines and the mission. Stress is concern about the meaning and worth of your existence.
- **Physiology and Psychology are not Causes.** Physical and psychological factors do not cause stress like a carburetor makes an engine malfunction when it is stuck in the “open” position.
- **Public versus Private.** What you can say about stress depends on how private or public you understand the situation. A public context requires Marine to speak steadfastly; a private context permits more flexibility.
- **Tied to Expectations.** If the whole family expects dad being a DI at MCRD PI to be like a deployment, they are prepared for it, and stress is much lower. If the family expects mom being assigned to OCS is going to be like a garrison shop job, and are unprepared for the demands, stress is much higher.
- **Reflexive.** Marines often stress themselves in that they practice monitoring themselves and one another in their collective striving for the ideal, but they can easily slide into unrealistic or unreasonable self-judgment.

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Recommendations

The Marine Corps needs Marines to pursue absolute steadfastness, and be committed to the Corps and fellow Marines—this is the basis for Marine culture, and instrumental in the battlefield success of the Corps. Essentially, Marines learn through training and social life in their units to put the mission and the good of the group ahead of their own: in essence, to be willing or even proud to "jump on the grenade." But when the ability to flex and so balance commitments is compromised, or nonexistent to begin with—when Marines lack strategies for how, when, and why to live out total commitment to Marine ideals, but judge how, when, and why to put family first—stress can become debilitating. Total commitment on the battlefield is easy to see. A wounded Marine makes a judgment that he should not leave a firefight despite grievous wounds thereby ensuring maximum survivability of the group by keeping his weapon operating. Refusing to flex by seeking medical treatment is appropriate and important. Practicing this kind of refusal when the choice is between leaving base at 1700 to attend your daughter's play or staying to finish paperwork may not be the right thing to do. The point is that failing to have strategies—how, when and why to speak and act in certain ways—and the judgment of how, when, and why to use those strategies, undermines Marine resilience. Such failures appear to compromise readiness as well as negatively impacting issues like marriage, child-rearing, self-care, and so on.

The good news is that most Marines know some good strategies and exercise good judgment. As importantly, they support resilience work as leaders and peers. They carry strategies and judgment about primarily non-combat, non-operational resilience work with them into the Corps from the civilian world (from parents or coaches for example). Some of these are good, some are bad. In the Corps, they learn primarily combat resilience work from the institution. Strategies and judgment for operational resilience come from the example of other Marines, explicitly from leaders, or through the Marine's own discovery learning. The challenge for the Corps is that this last kind of learning is mostly a private, ad hoc process. This means that significant variability in quality and quantity exists in terms of strategies and judgment—one way the Corps itself recognizes this variability is in the use of the phrase "command climate." One commanding officer can be radically different

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from another in his or her support of NCO's exercising judgment in letting Marines go home at 1400 on a Friday after achieving good results during the week. We do not mean to imply that such a practice is inherently good. After all, the CO who does *not* permit such judgments at the NCO level may permit or encourage other forms of recognizing the humanity of Marines that are more powerful or appropriate for the type of unit, or the location of the unit, or the usual jobs performed in the unit, and so on.

The Marine Corps can best help Marines continue or learn to be resilient by refining its culture through 1) acknowledging that its interest in more resilient Marines requires training them in strategies and judgment that form the basis of being flexible. The goal is to teach Marines to be able to balance commitments like being a good father or a good monetary planner with being absolutely steadfast to Corps (combat) values. Similarly teaching them strategies and judgment in confronting the slippery slope constituted in the subtle changing from "striving for the ideal" to "achieving the ideal." Performing the former and expecting the latter is a recipe for disaster. 2) Identifying those existing private/local best practices that can be turned into principles that inform training in strategies and judgment at Marine Corps schoolhouses. This refinement of Marine culture means getting explicit about some "how to's," "why's," and "when's," that are normally left up to the individual Marine to figure out on his or her own. While we see value in this sort of built-in test of a Marine's abilities to discover and use insider knowledge as a measure of the Marine's resourcefulness, we think such tests are most appropriately framed in terms of direct combat and operational evaluations. For example, can a Marine figure out how, when, and why to adjust his defense in light of a changing situation on a simulated battlefield.

We recommend:

- **Identify Models and Content for Strategies and Judgment Training.**
Gather examples from successful Marine of best practices for using judgment to employ effective strategies across a range of non-combat and operational situations both within and outside of the Corps.

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- **Turn Models and Content into training for Schoolhouses.** Allow schoolhouses the local flexibility to turn concepts into appropriate training, whether TDGs, locker-box talks, or other effective forms.
- **Train the Trainers.** Alert instructors at schoolhouses that preparing Marines for a more expansive range of challenges is as important as preparing them for combat if readiness remains a key Corps goal.
- **Give Marines a Vocabulary and Conceptual Toolbox for Dealing With Stress.** Marines can develop as better resilience craftsmen if they know what to look for, have a vocabulary for discussing it, and are encouraged to do so.
- **Put it in Writing.** Amend key doctrinal publications to make clear the Corps' commitment to enhancing Marines' capabilities (judgment). For example, revise MCWP 6-11 *Leading Marines* and MCRP 6-11c *Combat Stress* to use "family" in a positive sense, valuable in its own right, and not as it currently stands, a source of stress and a burden on readiness.
- **Reinvigorate the Priority of Face-to-Face Marine Interactions.** For example, re-examine the policy of PCS'ing Marines post-deployment, which suggests that relationships and cohesion developed by Marines is secondary to the Corps' administrative needs.
- **Use Previous Cultural Change as a Template.** Draw on lessons from the shift from attrition to maneuver warfare to integrate new ideas into present training.
- **Expand Research to Include Families.** Our single biggest knowledge gap in resilience is direct data from families. Right now we have half the story, so to speak.

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Chapter 1: Introduction

Background to the Project

Over the past twenty months, the United States Marine Corps' Training and Education Command (TECOM) has supported the Assistant Commandant of the Marine Corps' (ACMC) effort to "Institutionalize Resiliency Training" per Priority #1 of the 2010 Commandant's Planning Guidance. Primarily oriented on the physical "pillar" or "cord" of what has become the idea of "Marine Total Fitness," TECOM has sought to more fully understand resilience from the standpoint of Marines themselves. An open question exists as to how the physical manifestations of stress are related to the cultural value-oriented lives of Marines. While much research into the physical aspects of stress focuses on bio-physiological mechanisms, this focus has the effect of relegating cultural values to secondary importance.

There is abundant evidence however that value-orientations like those found in hypothetical comments like these – "killing didn't stress me at all because I knew it was the right thing to do," or "I try not to think about that IED blast," or "my life isn't worth living because I failed my Marines" – have much more to do with stress in most Marine cases (with the exception of Traumatic Brain Injuries) – than the operation of the Hypothalamic-Pituitary-Adrenal (HPA) Axis. In fact, research and summary papers on stress and human performance collected by the National Research Council in 1988 cite ample evidence of conceptions on physiology. This is a straightforward explanation for the fact that not all Marines become traumatized due to service, and not all Marines have difficulty reintegrating into society after deployment or service. Ultimately, the position taken in this study is that the mechanistic approach of much physiological research into stress and resilience ignores a substantial portion of the actual data set. Toward the end of "plumbing the depths" of resilience, TECOM drew on research support from the Center for Advanced Operational Culture Learning (CAOCL) to initiate this primarily qualitative study of

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resilience that focuses on what stress and resilience are to Marines in terms of what they actually say and do.

Time, cost, and access to Marines kept this initial original research effort modest. It consisted of a six-month study of instructor staff and candidates/recruits at Officer Candidate School (OCS) and Marine Corps Recruiting Depot Parris Island (MCRD PI). The primary method was group and individual interviews along with some observation of training events. Additionally, the researchers conducted a quantitative study of institutional language at OCS, a linguistic survey of Marine Corps doctrinal publications, and a literature review on resilience resulting in an annotated resource library on resilience containing approximately 300 scholarly, news, and Marine Corps documents.

This report delivers a set of findings on how Marines actually talk and act in order to be resilient. Based on these findings this report offers a concise set of actionable recommendations for meeting the Commandant's guidance to institutionalize resiliency training. Both findings and recommendations are based on a scientifically plausible explanation of *both* resilience and steadfastness. Resilience will be misunderstood, and be incoherent without a robust understanding of steadfastness (see Appendix A for further discussion).

Our research approach has been characterized by three assumptions that substantially differentiate it from the majority of efforts to meet the Commandant's guidance both within and outside the Marine Corps. **First is the assumption that stress and resilience are ways of being, not physiological processes or psychological traits, although they may entail both physical and psychological considerations.**

It is our contention that the majority of current physiological and psychological approaches to stress and resilience assume or propose the scientifically indefensible idea that Marines are controlled by their physiology or psychology. The idea that "the HPA Axis⁸" or "the psychological trait of adaptability" is the cause and/or explanation of stress, resilience, and steadfastness among Marines is akin to saying that when a Marine is

⁸ The explanation of the HPA Axis by the National Institutes of Health is a case in point, <http://www.nichd.nih.gov/news/releases/stress.cfm>

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speeding in a car, the explanation for the phenomenon is that “the car is driving the Marine.” This is a scientific mistake of the first order for two interrelated reasons.

First, the person – the Marine – is left out of the picture and so are all the capabilities of persons such as creativity, knowledge, perception, choice, understanding and so on that go into controlling a car. Second, these capabilities are then illegitimately assigned to the car. Cars, however, are incapable of “driving” anything – and so are both the HPA Axis and psychological traits when it comes to human social actions like charging an enemy combatant or committing suicide. A scientifically supportable understanding is that Marines train and use their biology and psychology; their biology and psychology do not use them. If this assumption is well-grounded, then the socio-cultural lives of Marines – how they talk and act – become the critical focal point for research.

Our second assumption, based on the first, is that understanding resilience requires understanding steadfastness. The primary cultural orientation of the Marine Corps is toward steadfast maintenance of core/Corps values in service to the Corps' warfighting purpose and its philosophy of warfare (MCDP-1). This means that resilience (in the sense of “bouncing back” from setbacks) only occurs in the socio-cultural context of talk and actions that embody steadfastness. For example, because the Marine Corps expects Marines to remain steadfast in achieving the mission, it calls for Marines to continue to fight even after losing a buddy in battle. **This means that what counts as stress, resilience, and steadfastness is primarily a matter of how Marines conceive of their way of life.** In short, if we do not understand what Marines are actually doing and saying culturally, we fail to understand what counts as resilience for Marines. The implication here is that the real causes of stress for Marines are to be found in Marines striving to live up to their cultural values (steadfastness) in a world of limits – finite time, finite knowledge, finite capability, finite vision, and so on.

Finally, we assumed that Marines are already substantially resilient, especially in terms of combat preparedness. This means that the Marine Corps must already be doing something important and effective in terms of training Marines to be resilient, as nearly all civilians entering the Corps do so without prior combat experience. Resilience has to be coming from Corps training, and so understanding where and how such training occurs, as

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well as what its impact might be, was one of our goals. This assumption impacted our choice of research sites: Officer Candidate School (OCS) and Recruit Basic Training.⁹

The difference in approach to studying resilience constituted by these assumptions amounts to this: Marines have substantial control over being stressed, being resilient, and being steadfast. This control extends even to the extent that what one Marine considers stressful another may not, because the first Marine has developed – intentionally or not – a different conception of what counts as a stressful. **In short, one Marine’s stressor is another Marine’s “easy day,” because each holds a different conception of what counts as stress.** This position presents Marines as having much more control over stress, resilience, and steadfastness than most current research efforts admit. The novelty of this position can be appreciated in our claim that stress is not the result of a *mechanical* “shock” or “trauma” to a Marine’s bio-physiology or mind. Instead, stress is found in a Marine’s sense of a threat if a mission is not met, the lack of plan for making payments on a newly purchased truck, the loss of trust in a spouse, the meaning drawn from the death of a buddy in combat, and the belief that one ought to have brought home all one’s Marines *alive*.

Insofar as these fundamentally social and cultural realities are the building-blocks of stress, resilience and steadfastness are similarly to be found in such social and cultural realities; namely in the ways that Marines talk and act relative to such realities. It is only in this kind of approach that we can make sense of the example experience of veteran SEAL sniper Chris Kyle¹⁰. After multiple combat deployments in support of Marine operations, Kyle reports taking part in a simulator-based study that included realistic combat environments. In the study his heart rate was monitored. His doctors were baffled by the fact that in combat simulations his heart rate *went down*. Only when the simulation included a Marine getting shot did his heart rate go up. In our understanding of what stress

⁹ We realize that OCS primarily is oriented toward screening and evaluation, and toward training only in the service of the first two purposes, compared to Recruit Basic Training. Our position, however, is that the “training” at OCS is as effective in conveying Corps understandings of stress, resilience, and steadfastness, even in its limited form, as that done at Recruit Basic Training. Moreover, we intended to visit both the School of Infantry and The Basic School but we were not successful in navigating the staffing process for gaining access to these training sites (we had limited access to TBS through pre-existing relationships).

¹⁰ That Kyle is a SEAL does not invalidate the idea that stress and resilience are social and personal, in fact it brings up the interesting possibility of examining his training, judgment, and personal choices to better understand how he handles combat stressors such that his heart rate goes down in simulated combat.

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and resilience are, Kyle was prepared for a certain kind of stress (combat), and so his physiology reflected his understanding and preparedness. What he was not prepared for was how to think through and make a sound judgment about a sense of failure or guilt over the death of a Marine he was supporting: "As I watched that scene, my blood pressure spiked even higher than it had been. I didn't need a scientist or a doctor to tell me what that was about. I could just about feel that kid dying on my chest in Fallujah again."

Resilience/Rigidity: The Limited Utility of Key Terms

The original proposal for this project called for a qualitative study using empirical research methods—interviewing and observing Marines—to produce a clear conceptualization of resilience, based on the real life practices of US Marines. The proposal framed resilience as part of a dualism: *resilience* vs. *rigidity*, and asked us to investigate how Marines understand the relationship between the two, how they relate to stressors and values challenges, and to what degree and how Marines exercise control over being resilient.

Early in our research we realized we needed to change our terminology. It is important to understand why this change was required. In English we often use terms and metaphors that refer to tangible things to create meaning. For example, to convey the meaning that there was a tense social situation we use the phrase, "the tension was so thick you could cut it with a knife." The idea is that an intangible, difficult social situation can be made appreciable to a listener by referencing the common act of cutting a tangible thing, like a thick, taut cable. We can understand the degree of social tension in a relationship by referring to the degree of physical tension in a cable.

Problematically, however, we sometimes overlook or exclude important differences between the social and physical worlds when we use metaphors like this. Such is the case with the terms resilience and rigidity when applied to the social realities of how Marines talk and act¹¹. Resilience and rigidity are taken from world of engineering physical things, for example, in creating steel and concrete systems such as skyscrapers. As such they are

¹¹ See Appendix C for etymologies of significant terms we found in our survey of research literature for this project.

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excellent for capturing the structural properties of a steel beam such as the degree to which it can bend without breaking.

The human social world of persons, and certain kinds of persons like “Marines,” or “parents,” or “believers,” or “politicians,” is qualitatively different than the physical world. While human beings *as physical systems* may permit the use of words like “rigidity” in relation to bones, not all worlds useful in describing in the physical world can legitimately be applied to persons *as social beings*. The American Federal Civil War unit, “The Iron Brigade,” makes an analogy between the social cohesiveness of the soldiers comprising the unit while under fire, and the resistant qualities of iron. But understanding soldiers to be acting *as if* they were made of iron is very different than understanding soldiers to be acting *because they are made of* iron. The latter is a mistake.

Having rigid bones and being a rigid person, therefore, are two very different kinds of description. The first is a description of a quality emerging from the structure and relationship of bone cells in the human body. The second is a moral judgment about failing to act in an appropriate way. This second use of the term *draws on* the idea of rigidity in the physical sense but the two uses of the same word do not mean the same thing at all, especially when we realize that rigidity in bones is neither good nor bad morally, but in persons rigidity has a negative moral connotation.

When we encountered Marines, candidates, and recruits in our research, we quickly discovered that they *could be* said to be *resilient* in the sense of “bending but not breaking.” The translation of this physical material characteristic into the social world of human values is something like Marines having their value orientations or commitment challenged in a range of ways, but being able to maintain or return to a characteristic set of patterns of talk and action. A new Marine returning home on boot leave may have a couple bites of mom’s apple pie so as not to offend or upset her, but he does not eat the entire piece or ask for seconds in the interest of maintaining his new self-discipline toward physical health.

We came to call the idea of Marines remaining “true” to certain valued ways of talking and acting “steadfastness.” We did not generally find any “rigid” Marines, that is, Marines who were one way and one way only no matter what the situation or issue—except for Marines identified by participants as being problematic. Instead we found

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Marines, candidates, and recruits who were *steadfast*, that is, committed to maintaining, promoting, and pursuing prized value orientations. Resilient and steadfast Marines, candidates, and recruits were soon found to be highly capable in terms of being resilient and/or steadfast but their capabilities depended on the concepts and judgment they used in the contexts in which they were acting.

Ultimately we settled on approaching the project with the idea that Marines seek to marshal *flexibility* (the capability of modifying one's outlook, talk, and actions) in order to be *steadfast* (committed to Marine ideals) while achieving a livable balance with other kinds of commitments, like being a good parent, a caring leader, a great triathlete, and so forth. The important change to note is that being resilient is incomprehensible without understanding steadfastness, and that Marines actively seek to balance these two ways of being as value-orientations for living meaningfully. In this sense resilience and steadfastness have little or nothing to do with the typical biophysical idea of resilience as body biochemistry returning to homeostasis.

Public/Private Schema

Marines, candidates, and recruits modify their talk and action depending on who's watching and listening. For example, among their peers, Marines can and do talk and act differently compared to when they are among candidates or recruits. As one drill instructor explained:

And it's just -- it's that they instill that built-in discipline...it's so easy to do the right thing when you have 90 recruits watching you, it's so easy. It's such a powerful motivator. You could push yourself so hard at PT. You can run and scream when they're all watching you. Things you would never do with your peers. –P8 SDI MCRD PI, 07/09/2012

Marines, candidates, and recruits decide and negotiate whether their immediate situation or group counts as public or private, and adjust their activities accordingly (though not always in time, with sufficient foresight, or successfully).

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For us as researchers the public/private schema meant that we could not base our research only on the public or formal enactment of Marine talk and actions, because often the public realm is where steadfast commitment to values is on display, and in a substantive sense *required*. If we concentrated only on this kind of talk and action, we would only have half of the picture since resilience work for Marines is conducted in the service of core values. Resilience work happens when a Marine seeks to remain committed to important core and Corps values. Sergeant “Eddie” Wright’s actions are a case in point. After both his arms were blown off by a rocket propelled grenade during an ambush in Iraq Wright modified his approach to combat (marshaled flexibility) from trigger pulling to vocalizing commands. In short, we realized that a much more robust picture of how and why Marines marshal flexibility in the service of steadfastness would be located in the private realm, where Marines talk to and act with one another as members of a close family. It is here, out of the institutional and public eye, that Marines negotiate with each other about who can take a nap and when, in order to retain the strength and acuity of mind, to exemplify leader qualities, for example in front of new Marine recruits.

This public/private schema lets us do two other important things. One is that it has explanatory power: talk and action that seem out of place or strange, as well as situational variability in talk and action, can be explained by considering how relatively private or public the situation is. For example, during our observation of a conditioning hike at OCS a candidate fell back, eventually falling out of the formation. Her falling out was marked by a public performance of distress: gasping, loud groans, sidelong looks to see who was watching her, and finally falling to the ground with a cry. Immediately after at the rest break, a Sergeant Instructor expressed disapproval of the hike drop to the platoon by saying, “Drama, drama, drama, always drama!”

When pulled aside by the researcher and asked about his comments, this staff sergeant explained that he would never fail to render appropriate aid to anyone who fell out of a hike, that his personal feelings would never change how he followed standard operating procedure, that safety was always his top priority, and so on. He perceived the researcher as an outsider, and so explained his “drama” statement as the expression of a private, irrelevant personal feeling, to guard against a potentially public assessment of his

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statement as a failure to uphold the institution's values. However the researcher, a former Marine, was able to develop rapport with the staff sergeant, who eventually realized that the researcher was genuinely interested in understanding the staff sergeant's response, and not trying to catch him violating a rule.

With a new context—a more private interaction with a former Marine who is not an inspector—the staff sergeant gave a very different answer, explaining his ideas on how best to highlight appropriate and inappropriate behavior during the conduct of the hike, and so how best to teach the platoon. Neither response was more or less honest—we accept both responses as authentic. But the difference between two responses to the same question makes more sense if we see one as a public response and the other as private. The public/private schema therefore helped us understand what was a “genuine” performance among Marines; that is, what was really meaningful rather than a joke, an affectation in order to mislead an audience, or a phrase or act designed to get rid of annoying researchers.

This makes visible the second way this schema increases precision: by highlighting cultural ideas of what is permissible based on audience. There are things Marines can say with other Marines that they can't say in the public civilian world, because of a cultural gap between the two worlds—there is too great a possibility for misunderstanding or incomprehension. But even between Marines, there can be further distinctions between what a Marine can say generally and what can be said between Marines who share close bonds of cohesion, based on many different kinds of criteria (ranging from rank and MOS to combat experience and knowledge). This public/private distinction is a continuum, not a dualism—any interaction is *relatively* private or public.

Recommendations

Our research has led us to an understanding of stress as emerging from when Marines slide from an expectation of “striving for the ideal” to “being the ideal.” Striving for the ideal is a commitment to steadfastness: acting and talking in ways commensurate with Marine ideals. In their training and performance in combat we expect Marines to strive to honor the example of heroic Marines who have gone before them. Marines may however

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slip into an unrealistic belief that they can be the ideal—an unreasonable expectation of perfection. Marines who hold their unit to a rigorous standard of PCC/PCI's because they have a commitment to the lives and safety of their Marines, are striving for the ideal. Marines who blame themselves because they should have somehow "known" a planned patrol route would be targeted for an ambush, and thus hold themselves unreasonably accountable for the lives and safety of Marines, are trying to be ideal. There is an art to being able to genuinely strive for how Marines should live, and unrealistically expecting to be ideal, and that art centers on managing a conflict.

This conflict plays out as conflict between remaining steadfast in the expression of core/Corps values (i.e. a Marine 24/7/365 from enlistment to death), and exercising flexibility (I need to sleep in order to be effective). Both the ideal of remaining steadfast and the reality of exercising realistic flexibility are matters of judgment in the Marine Corps. The default position however is that Marines are steadfast in their service to the Corps, resulting in the ideas of practicing flexibility only under duress (“Get to the doc, now!”) or only in the service of steadfastness (“I’m only taking enough time off to refit, not go on vacation with my family”).

Most of the stress issues we encountered from Marines had to do with an inability – whether from lack of knowledge, failure to act, or lack of institutional or unit support – to marshal flexibility in the service of steadfastness, often because Marines misjudged what value orientation they should hold in a given context. For example, “suck it up Marine!” is an appropriate response when the enemy is coming over the barricades. It may be entirely inappropriate for a Marine who is asking for time off to make a last ditch effort to save his marriage.

These recommendations are designed to respect the idea that the tension between “striving for the ideal” and “being the ideal” emerges from the Corps’ warfighting philosophy. This philosophy prizes speed and aggression on the one hand, and the idea that the mobilization of speed and aggression depends on the strength of a Marine’s belief in core/Corps values (with physical performance often seen as an indicator of the strength of that belief) on the other hand. Ultimately, our research suggests that an institutional effort to train Marines at all ranks make better judgments will pay significant dividends not

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only in terms of resilience, but in terms of readiness. For a complete discussion of these issues, please refer to Chapter 4, "Conclusions & Recommendations," pages 64-76.

Our recommendations center on refining Marine Corps culture.

1. **Address Tensions Between Steadfastness & Flexibility.** As part of the zero-based curriculum assessment at Marine Corps University, marshal institutional resources toward developing:
 - a. **Models and Content for Judgment Training.** Gather examples of best practices for using judgment across a range of non-combat and non-operational situations both within and outside of the Corps from successful Marines. These can be used to develop guided discussions as content at schoolhouses and development courses.
 - b. **Turn Models and Content into TDG's for Schoolhouses.** TDG's are known and effective training tools for Marines, because they allow Marines to develop and practice decision-making. Use them as a means to development judgment as it relates to non-combat decision-making, e.g. in domestic scenarios, or productively handling failure. An example would be to ensure more than a "don't do it" message from Senior Drill Instructors to new Marines in a talk about what might happen on boot leave. A TDG could be developed that would give SDI's practice in not only alerting new Marines to potential pitfalls on boot leave, but instructing them on how to navigate them and what to do or what to think if they slip-up¹².
2. **Train the Trainers.** In addition to adding curricular content that helps train Marines for non-combat/non-MOS stressors, the Marine Corps should make explicit to instructors at schoolhouses that they have an obligation to prepare Marines for the full range of challenges and stresses they will face. Instructors at places like MCRD PI and TBS already uniformly understand their obligation in terms of preparing Marines for combat. However, instructors like SDIs at MCRD PI or Staff Platoon Commanders (SPCs) at TBS, do this for broader life stressors on an

¹² We understand TDGs to be primarily associated with officer and SNCO training, but feel they can be adapted for training junior Marines.

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individual, ad hoc basis. The aim for such training should not be prescriptive, for example that SPCs should tell new lieutenants to give their junior Marines x days off once a quarter to connect with families, or create a decision matrix for juggling multiple obligations. Instead, instructor training should raise the issue of preparing for non-combat/non-MOS stressors and make clear that instructors have a duty to share their judgment and experience—this is an enabling step to supplementary training added to the POI. The goal should be trainers who understand that they are helping young Marines and the Marine Corps by recognizing that stress and resilience is not solely a combat issue.

3. **Institutionalize *Support for Resilience Work*.** Instead of institutionalizing resiliency training, the Marine Corps should *institutionalize support for resiliency work*. It is clear that some kinds of talk are not possible in the public sphere, and so some kinds of resilience work training likely cannot be institutionalized. For example, it would not be possible for the Marine Corps to explicitly develop a TDG centered on “how to” remain steadfast after a decision to open fire on a vehicle speeding toward a checkpoint resulted in civilian casualties. But, the Corps can point toward books, articles, and talks as recommended reading for Marines much like the Commandant’s Reading List, and incorporate guided discussions on such sources into training. If done carefully and promoted appropriately, Marines with good judgment will pick up on and deliver the knowledge, concepts, and ways of acting that emerge as lessons from this kind of work.
4. **Give Marines a Vocabulary and Conceptual Toolbox for Dealing With Stress.** Content here would emerge from 1a and 1b above. An example of vocabulary change would be from “you’re a dirty hump-drop, get out of my face,” to “you failed in your mission, let’s review what happened, figure out why, and put a plan in place to make sure it doesn’t happen again.” An example of a conceptual tool would be, “remember when I talked to you about how to engage failing on a hump productively? Let’s use that same approach for figuring out what’s going on at home...” The concept here is the idea of teaching Marines what counts as good judgment and how/when/why to apply it – in the form of a productive model for

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dealing with failure – from core Marine training to a non-combat oriented situation/issue. These concepts and more precise vocabulary should be reflected in training as per 1a and 1b, as well as in doctrinal publications as per 4.

5. **Put it in Writing.** Amend key doctrinal publications to make clear the Corps' stance on this tension and its commitment to enhancing Marines' capabilities (judgment) in that regard. We specifically recommend revising MCWP 6-11 Leading Marines and MCRP 6-11c Combat Stress. Currently, these publications reserve the word "family" for the relationships between Marines, or position families as a source of stress and a burden on Marines' readiness. Additionally, we recommend a review of MCDP 1 Warfighting, the central doctrinal publication that provides Marines with the Corps' perspective on the world. Currently, "family" is used in MCDP 1 only to refer to "families of equipment."
6. **Reinvigorate the Priority of Face-to-Face Marine Interactions.** Face-to-face interaction within cohesive units is critical to Marine leaders knowing their Marines and conducting the local, contextual delivery of good judgment in the form of mentoring and peer to peer guidance. Putting administrative concerns like manpower slating ahead of cohesion de-legitimizes face to face Marine interaction. An example of this is PCS'ing Marines post-deployment, which suggests that relationships and cohesion developed by Marines is secondary to the tasks that require "doing" by the Corps.
7. **Use Previous Cultural Change as a Template.** The scope of our recommendations may seem daunting, but the Marine Corps has had previous success in changing its culture, for example from an attrition mindset to a maneuver mindset. Among the key mechanisms for that were making changes at the doctrinal, schoolhouse, unit and individual level. The Corps can draw on that experience to refine its culture to account for flexibility through explicit training in judgment.
8. **Expand Research to Include Families.** By excluding families from this research, the Marine Corps risks having an incomplete self-assessment that misses the place where Marines report the most distress and their greatest challenges. While difficulties with stress – and even learning or generating good/bad habits for

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managing stress – occur in theater, most serious issues appear to emerge as Marines try to engage their sense of their worth among their family, civilian and garrison contexts.

Findings on Stress

The Marines in this study referred to stress as they experienced it as a focus on or concerns about being a certain kind of person: A good Marine, a loved father, a trusted sister, a respected community leader, a high-performing teammate, and so on. In this sense, stress emerges from attempts to live value-oriented lives in communities of people among whom you want to be counted as a member, and the right kind of member. Marines are concerned with several kinds of relationships, e.g. with peers, leaders, juniors, family, and friends, and any of those relationships can be a location for stress. Stress is primarily conceptual in the sense that a Marine needs to have the concept of what it means to be a certain kind of person and be invested in being that kind of person (like a “moto Marine”) for stress to occur. In other words, what do Marines say and do, or fail to say and do, so that they or other Marines (or family, or friends) call into question their motivation? The reality is that Marines can be – and as we found, actually are – stressed if they are not entirely clear about things like how to be a good “Third Hat” at Parris Island or a decent mother.

Our major findings on how Marines understand stress include that:

- **Stress is Taught Socially.** The Corps teaches Marines what ought to “count” as stress and what ought to count as a stressor. The Corps defines these primarily in combat and operational terms. The Corps also teaches Marines how and why to manage those stressors it thinks are important and relevant to being a Marine. Importantly, the Corps mostly leaves non-combat and non-operational concepts of stress, stressors, and how or why to manage them, up to individual Marines.
- **Stress is Conceptually-based and a Choice.** Marines, like all people, need two kinds of concepts in order to be stressed: a concept of what is happening on the one hand, and a concept of what the even means on the other. For example, recognizing that your spouse is angry, (or frustrated vs. angry) but also recognizing what your

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spouse being angry means to your marriage. Marines don't always have the concepts to realize they are stressed. Sometimes they ignore stressors because they don't know how to address them or might be considered un-Marine-like. Sometimes they do not have any support for productively dealing with them. Marines are in control of what they are stressed about, and how they are stressed, though they might not always be aware of it. Marines choose to enact ways of being stressed as a way of having membership in the Corps especially when it comes to combat and operational stressors.

- **Stress is Dynamic and Variable.** Stress varies between Marines and is dynamic in intensity and variable in circumstance over time for any individual Marine. This is endemic to being a person. One recruit's stress over re-making his rack 30 times in a row is another recruit's rescue from drill.
- **Stress is not Primarily Physical/Mechanical.** Stress is not pressure or resource demands (letting off steam, depleting a gas tank) on mechanistic physical systems (architecture, engines). These are metaphorical presentations of the bodily experience of stress as defined by American culture. Physical issues such as imbalanced cortisol levels may be symptomatic of a Marine under stress they should not be misread as the *cause and explanation* of social and personal stress in humans.
- **Stress is Primarily Social-Psychological.** While the physical demands placed on Marines can impact their functioning, they are often perceived as challenges to be overcome as part of being a Marine. Marines report being well-prepared for combat and operational demands. Instead, when they talk about stress, Marines point to their relationships and their understanding of their worth relative to some standard. That standard can vary depending on the situation and persons involved, such as "I am not a good combat Marine but I am a good father."
- **Stress is Existential.** When we found the most distress was where the institutional demands on the Marine defined them solely or primarily in terms of their duty as combat and operational entities was in conflict with the Marines' understanding of themselves as a whole person Marines report stress over questions of meaning, not just surviving. In fact, insofar as Marines are dedicated to selflessness in pursuit of

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mission success and protecting their fellow Marines, surviving is a *secondary* value. The Marine Corps understands and supports Marines as who they are in terms of their duty—this is legitimate, as Marines report a great investment in being the right kind of person, the kind who would unflinchingly give their lives for their brothers and sisters. To better support Marines, the Corps can recognize that Marines, like all people, are also concerned with who they are as spouses, parents, and people.

- **Qualitative Differences in Stress.** We found some stress, in certain contexts, was useful and served to bring out the best in Marines. We call this *eustress*. But some stress is *distress*—stress that degrades performance and causes Marines to question themselves on existential issues. Marines also talked about a sort of general stress that is neither good nor bad, a sort of vague sense of things being “wound up” or “spun up.” Heart-rate measurements and cortisol levels in the blood are not good markers for *which* kind of stress a Marine is engaging. Which kind of stress makes a critical difference in how the Corps can train Marines to manage it.
- **Stress is Related to Preparation:** Marines link stress to having or not having appropriate concepts and strategies for a given situation and context: having prior experience, training and appropriate expectations are all ways a Marine can be prepared. Distress is associated with feeling unprepared for a situation and context—when Marines decide they are trained and capable of dealing with a situation, problems become challenges, and distress becomes eustress. This means stress and its management as very much within the Corps’ ability to change.

Mindset is going to make or break the Marine in any type of environment they might find themselves in. So a lot of times, my mindset is that nothing that those instructors or any of these students say or do here is personal. So you know if somebody yells at me, me knowing that it's not personal is not going to affect me. As opposed to other Marines that don't understand that, and they're getting blasted or yelled at for whatever reason, they're taking it personal, so they're not going to react the same way, where I'm

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going to just go execute, but they're going to start building this stress that is not even there. –DIT MCRD PI Group Interview, 07/11/2012

- **Stress is Qualitative, not Quantitative.** We found that stress was best described qualitatively, although there may be quantifiable physiological effects in response to how a Marine conceptualizes stress.
- **Physiology & Psychology are Context for Stress.** Physiological, psychological and social factors are important context for stress, but they do not *cause* stress in and of themselves. Marines decide socially whether, how, and to what degree they're stressed relative to these factors.
- **Public versus Private Expressions of Stress.** Marines express stress, or don't express it at all, differently in public and private spaces. A commander giving a liberty brief in public to the company will talk differently when addressing the same issue with their First Sergeant. In the former case they must talk as if all the Marines in the company will act the right way, but in the latter case may talk more realistically about what to do when some don't.
- **Stress is Based on Expectations and Framework.** Stress is intimately tied to expectations and framework as part of preparedness. A Marine can decide a situation that counters expectations is highly stressful, for example, a single parent who expects a garrison assignment will allow them to take care of their children:

[My Master Sergeant] was just like, "No, everything's filled, but I can send you to OCS. You get plenty of time off there and blah, blah, blah." So I'm like OK, you know, and I called up here, talked to the first couple of people. "Yeah, you get all this time off." I get here and it's, OK, I got to send my kids away again. (laughter) So it's rough, but, you know, I'm always going to do my job, but not so much bitter about it, but I know my kids are suffering, so now is it before in my career, earlier on in my career, young, you know, go, go, go, it was OK, but now it's to the point where it's like I'm at the back

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*end, and when the Marine Corps is done what is my family going to think?
So that's what's in the back of my mind now. –P3 STAFF OCS, 06/18/2012*

However, reframing a stressful situation can reduce or remove stress:

The certain things that might not affect me, somebody else might have a different mindset. A perfect example is I PCSed here [to MCRD] from Okinawa, and my wife is also a Marine, she PCSed here as well, and we've got a place here. The first night, or the first two nights, you know I came here for the training day, then I went home and came back. Well I quickly realized that was not going to work for me, so I had a change in my mindset into coming here as taking this as a deployment. –DIT MCRD PI Group Interview, 07/11/2012

Again, this reality means that the Corps has excellent opportunities to change what counts as stress for Marines as well as how they understand and manage it.

- **Stress is Local and Contextual.** Marines understand stress differently in different contexts—combat, theater, garrison, home, at the little league game, during the cookout, and so on—because what counts as stress, what it means, how best to manage it, or even if it is permissible to admit that stress is present depends on their understanding of the context.
- **Stress is Reflexively Social.** Marines' understanding of stress is social, in that their decisions about what, how and whether to be stressed involve the values and judgments of their fellow Marines. But there is also a reflexive aspect as Marines judge themselves using the standards of their local unit and community. Often such self-judgment is harsh compared to the reality of what their fellow Marines and family actually think. The fear that other Marines who are qualified to judge might find you lacking can constitute debilitating distress. The Corps must address how and why Marines shift from a realistic understanding of their performance, to an

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idealistic and often impossible standard. For example, this Marine describes distress, a concern over how other Marines might judge his performance as the commander of a convoy ambushed in Iraq during OIF2:

But so when I found out that this was written about in a book I went and read it. And I was very concerned that he was going to say [I] was just ...scatterbrained and dorked up...and he didn't write that at all...He just wrote you know the artillery lieutenant responsible for the convoy was like clearly elevated and aggravated. But focused on you know like security and evacing his Marines who were losing a lot of blood and needed to be evaced or something short like that. So I realized at that point it was important for me to have that. That took out some of the shame. I think until I read that and to the point where I was reading that scenario, I was overwhelmed with a sense of fear and anxiety and I think if he had put something else in print that -- something that was more of an indictment on how I reacted or responded, I don't think I would have recovered from it. -P1 STAFF TBS, 08/02/2012

Resilience Work

Because we found that resilience is a way of being (an activity) not a psychological trait or a mechanical biological process that causes behavioral effects in Marines, we are arguing that it requires “work” on the part of Marines. Primarily the work is conceptual; that is, it is focused on how Marines talk and act in light of their values, commitments, and the kind of people they want to be. This is why we use the phrase *resilience work*, as a way of being mindful of the on-going, active nature of what we are describing and respecting the source of stress, resilience, and steadfastness in the social and cultural activities of Marines. Marines do resilience work as they try and balance out two competing demands: steadfastness and flexibility.

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- **Steadfastness.** Being a Marine demands that you be steadfast: completely committed to Marine Corps ideals and ready to sacrifice oneself in their pursuit.
- **Flexibility.** Being human means that you have limits: flexibility is required to mitigate limits toward the end of meeting the Corps' demand for steadfastness. Marines report that flexibility often means managing honoring and living with multiple commitments (family, personal development) as well as human limits. Human limits include the physical (the need for sleep, nutrition) but also the social (emotional connections and relationships outside the Corps). We note the Corps has traditionally looked at human factors as solely physical, we suggest expanding this to include social factors as well.

Marines search for ways to balance out these competing demands in ways they find meaningful and can accept. What is "acceptable" can be a complex issue depending on the context: if the issue is how much time to put in on a pre-deployment briefing, the unit's answer to what is acceptable is likely different than the answer from the Marine's family. Balancing here does not necessarily mean devoting equal time and energy to both steadfastness and flexibility—Marines often make their strongest commitments to being steadfast while carving out just enough time and space for other interests and commitments. The point here is that generally Marines tip the scales toward being steadfast, and marshal flexibility in the service of being steadfast. Extra-Corps relationships with family are a prime example of this dynamic management where family members are expected to manage their own expectations of their Marine in order to support his or her commitment to being steadfast. Importantly, in terms of the Combat Operational Stress continuum (COSC) color coded zones, Marines who are successful in doing resilience work are almost always in the "yellow," reacting to and living with considerable stress as they flex in order to meet the Corps' demand for steadfastness. This may be a prime area in which the Corps can make a substantive difference for Marines by validating the need to balance out a commitment to steadfastness with flexibility. We found that good Marines are already doing this through local practices, and so our suggestion here is not about institutionalizing lower expectations. Rather, we recommend

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identifying, and sanctioning where possible, those leadership practices that are already being deployed.

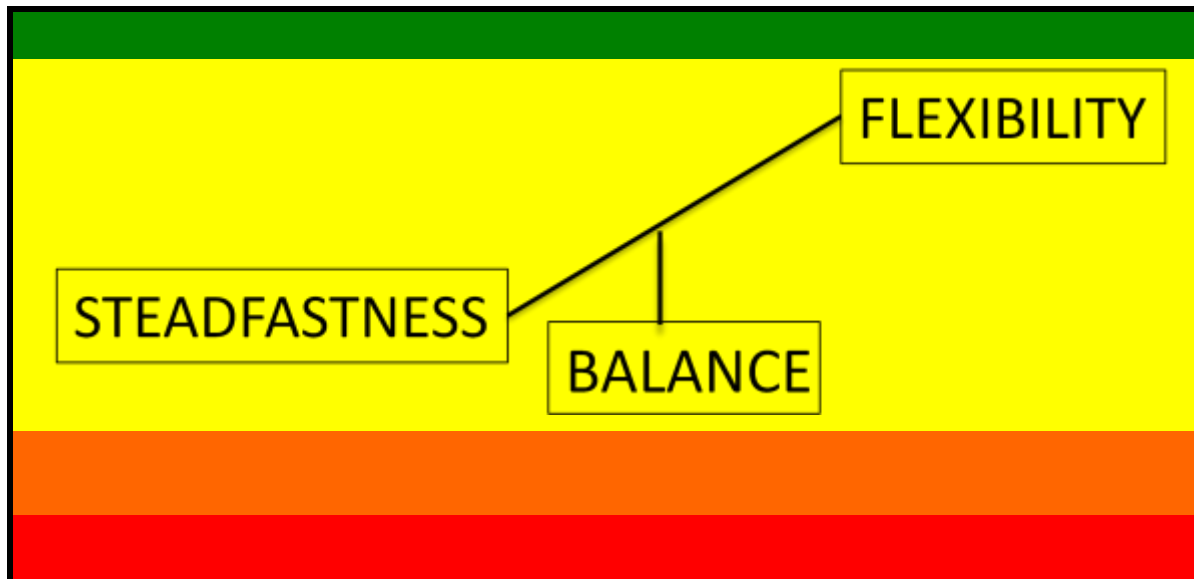


Figure 1. Resilience work as a livable balance between being steadfastness and flexibility, set against the Combat Operational Stress Control (COSC) color codes.

The following is an example of a Marine's search for balance, a struggle to find a solution that can be lived with. This example points toward the kind of dynamic that the Corps can influence through training and through refinement of its institutional expectations of Marines in different contexts.

*So it's hard because you already have all the stress that's here. I go home tired, I don't really feel like doing anything, but I still have this obligation to my children...I try to pass that on to my Junior Marines, because I feel like I fail at work when I'm at home doing what I need to do at home, or if I have something that I have to leave work for, I feel like I'm failing work, but then when I'm at work and my kids need something I'm failing... **There's no balance. There's no balance to it**, and anybody that says that they can balance it, like, "Oh, I'm a good mother, and I'm a good Marine..." You're going to fail at one trying to do the other, and it's hard. It's very, very hard because I try to do the best that I can*

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for the Marine Corps, and I want to give the Marine Corps my best and progress, but at the same time I've missed out on so many things in my kids' life. – P3
STAFF OCS, 06/18/2012

Ultimately, resilience work is fundamentally rooted in the quality of a Marine's judgment. Judging when, where, how, and why to be flexible is the foundation for steadfastness in the Corps. Such judgments are local and contextual, can vary by unit and those with whom the Marines shares trust relationships, and can change over time. Such judgments can be right or wrong, neither, or both, depending on the local context. Enhancing judgment among all ranks is, we think, the Corps' best chance for positively affecting Marine resilience.

Steadfastness

Marines learn to honor a profound commitment to an ideal, which emphasizes service to larger-than-self values. Marines point to heroic characters who die or suffer grievous injury in the course of acting in the service of such values. Unlike the social Darwinism of self-interest found in American business, Marines strive to live for the group over themselves. The Corps' vision of combat and what it takes to succeed in combat is based on a specific moral orientation: in knowing that he is backed up by fellow Marines who are totally committed to him and the mission, a Marine is *free* to focus on the mission and not himself. In this sense, Marines understand that to the degree they de-emphasize personal safety, collective safety is enhanced. Thus Marines often judge each other—and themselves—by how committed they are to their fellow Marines and to publicly available performance measures, such as physical fitness. Like resilience, steadfastness is *work*. It is neither a psychological trait nor a biological mechanical process. We found that steadfastness work is generally:

- **Public.** In being the institutional standard, steadfastness work is public and broadly visible both within and beyond the Corps. This is the view of Corps presented in recruiting commercials and on the Corps' official website.
- **Institutional.** The Marine Corps is in many ways built upon steadfastness. Marines are taught, encouraged, and practice living with honor, courage and commitment to

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their fellow Marines and the mission. This is written into doctrine, trained at schoolhouses, lived in operational units, and circulated in the institutional discourse of the Corps. The Corps wants Marines to make honor, courage, and commitment a habitual way of life. It rewards Marines who demonstrate steadfastness.

- **Taught, Maintained, and Policed Socially.** Marines aren't born committed. Starting with either the recruit depots or OCS, they are offered different ways of pursuing Corps values through speech but especially through action. The vision of the indefatigable 3rd hat at Marine basic training is a good example. Marines are rewarded for coming as close to the ideal in their spoken and embodied action as possible, for example, the respect of fellow Marines. For Marines who actually achieve the ideal in combat—the Marine who smothers a live grenade to save the lives of fellow Marines, the institution bestows awards like the Congressional Medal of Honor. Through statues, memorials, speeches, award citations, formal and informal performance, and the day to day evaluations of their peers, steadfastness is promoted and ideal performances of steadfastness are held up as exemplary. At the same time, institutional sanction and private ostracization makes blame visible. For example, the focus on foot marches in training affords Marines a chance to live out their solidarity with the Marines around them, but also affords the chance to fail and be labeled a "hump drop." Ideal talk and action thus help constitute an orientation for Marines on being steadfast.

Flexibility

Marines also learn to be flexible, finding ways to manage stressors and effect solutions to conflicts between being steadfast and having commitments and relationships that fall outside the Corps' public and institutional focus on combat and operations. This does not necessarily mean that all commitments and relationships that Marines experience are "covered" by Corps training. For example, there is no official training that we could find on how Marine officers are taught to meet their commitments to institutional requirements when those requirements exceed 40 hours per week. Often their work to achieve flexibility is in service of being steadfast, ordering their lives and asking those around them to

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support their commitment. We found that flexibility is usually local and more private, a contrast to the Corps public support of and focus on steadfastness:

- **Private.** Marines generate flexibility primarily through local and personal effort, and often with support from (or sometimes in spite of) mediating influences such as local commander's intent and command climate. Flexibility often requires and impacts families. For example, we learned from DI's at MCRDPI that a 10 minute lunch break eating a sandwich brought to base by a spouse while sitting in the family car can help the Marine re-commit himself to high performance for the rest of the day. But, as one DI, stated, "I'm single, who's going to bring me a sandwich?" thereby indicating both how much a family can matter and the reality that the ability to be flexible can vary significantly among Marines.
- **Command climate.** At the unit level, dependent on command climate and quality of leadership.
- **Marine to Marine.** Private interactions between seniors/juniors, and between peers.
- **Personal.** May be done as private conceptual by Marines, accounting for socially shared concepts and values.
- **Local.** Different local communities of Marines may have local common sense wisdom that Marines can choose to draw on to help achieve flexibility:

For example, my wife, we have friends that are drill instructors out here, and she's getting married, so one wife to another, how is it out here on Parris Island? What do I need to do? What should I -- how should I be preparing to come out here? And I've also talked with spouses, other drill instructors, and I've been told a lot of stuff like hey, if my wife is able to drop a sandwich off any vehicle, so that I could just run down and grab it out, that's -- you know that makes the day better. You know so that's what the process of me and my wife are doing right now, talking to drill instructors that are out there right now, former drill instructors, people that have done it before, and you know

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what's the best thing we do? And plus the instructors that are here are also tipping us off on what we need to be doing to be successful at what we're embarking on. –DIT MCRD PI Group Interview, 07/11/2012

Resilience Work

- **Preparedness matters.** Marines who are trained to do resilience work—have relevant experience prior to becoming Marines, get the right kind of mentoring and leadership, or have done self-discovery—are in a better position to be successful managing stress.
- **The unprepared.** Marines who are untrained are in the opposite position, and may push themselves until they or their families are broken, or more rarely, not push themselves, and fail to honor their commitment to being steadfast.
- **Variable.** Responses are not automatic—Marines choose what tools to use (or not).
- **Judgment.** Achieving flexibility is the result of exercising judgment and balancing out how to honor multiple commitments moment by moment. The most resilient Marines know when, and more importantly how, to plunge into steadfastness, and when to back off and be more flexible.
- **Flexibility in service of steadfastness.** The Marine Corps depends in part on private flexibility work to support overall readiness. *Steadfastness and readiness are the goal; the flexibility to honor other commitments is a means to that end.*
- **The Mission vs. Marines.** There is an inherent tension between serving the mission, which overlaps more with steadfastness, and taking care of Marines, which overlaps more with flexibility. This tension is understood differently between officers and enlisted, and may invite additional distress for enlisted Marines and officers differently. Enlisted Marines, especially junior ones, may privilege the safety of their fellows over the mission, and thus experience distress because they are not conceptually prepared to reconcile loss with mission accomplishment. Officers may experience the other side of this coin, privileging the mission, and then

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being unprepared to reconcile having accomplished the mission at the expense of losing Marines. We suspect that this may be a special issue for Staff NCOs, because they have a bridging position within the Marine Corps, still close to their roots as junior Marines, but having an expanded obligation as senior Marines who execute policy and operational assignments at the ground level. We do not have direct evidence for this, but based on the differing roles for enlisted and officers that Marines shared with us in the study, we suspect that some staff sergeants and gunnery sergeants may be caught in the middle of this tension between the mission and Marines. We found that officers handle this issue privately, through ad hoc discussion. All three groups may benefit from formal conceptual training at school houses, with each one framed differently to reflect the different context and social roles of junior enlisted, staff NCOs, and officers.

- **Problem-solving.** When examined in practice, resilience work looks like problem solving, e.g. figuring out how to continue to lead and have self-confidence after making a mistake that places Marines in danger.
- **Conceptual.** Often involves reframing the situation.
- **Implicated with cohesion:** Because resilience work is social and contextual, Marines in units with higher levels of cohesion are better positioned.
- **Not institutionalized for non-combat contexts.** Marines rarely point to institutional efforts as a course for resilience work training, except in direct support of operational readiness. In this way, the Corps sends a message to Marines that a combat orientation is the only important one.
- **Barriers to institutionalizing resilience work training.** Public/private tensions over what is permissible create a built in challenge to attempts at institutionalizing resilience work training. 3rd Hat drill instructors at MCRD PI may locally figure out how and when it is ok to take a nap, and they may need to do so in order to complete their mission, but how does one institutionalize rules for nap-taking?

But other things are simply just seeing, you know, it didn't even occur to me that I should lay down and take a nap, or that it would even help at all, but

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then you're at the RTF, and the recruits are in there for four hours, and there's a little spot, and a little cubby hole, that's out of sight and out of mind, and I see somebody else take a nap. And it occurs to me then, that's a great idea, that's probably the best way I'm going to get a little bit of extra sleep. So, then I started doing it. –P5 SDI MCRD PI, 07/09/2012

Institutional Discourse

As part of our study we conducted a computer-aided linguistic analysis of representative documents from OCS. We wanted to see how the institution represented itself, and represented the relationship between the mission at OCS and candidates to be Marine officers. We also examined top-level Marine Corps doctrine to see how family is represented in the institution's language.

Analyzing Language at OCS

- **Mixed method.** This analysis included a quantitative statistical description using linguistic profiling software, along with qualitative discourse analysis for meaning.
- **A discourse of transformation.** When compared to general English, institutional discourse at OCS has a distinctive pattern, including statistically significant higher means in talk representing the future, processes of change, and high levels of certainty.
- **Aspirants as subjects.** In this transformation narrative, Marine aspirants are subject to a process, as positioned as lacking agency.
- **Defined solely in terms of duty.** Institutional language at OCS defines aspirants solely by duty, and does not account for aspirants as holistic persons (e.g. having families).
- **Absence of agency.** The lack of agency markers for candidates may be a structural way for teaching them that the only appropriate agency is steadfastness.

Institutional Discourse: Marine Corps Doctrine

We also examined Marine Corps Doctrine to see how the Corps institutionally represents family.

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- **Marines are solely combatants.** Marines are defined solely in relation to combat. MCDP 1 uses the word "family" once, referring to "family of equipment."
- **Family only exists between Marines.** In Marine Corps doctrine, family is only represented conceptually as existing between Marines within operational units. Of top-level Marine Corps doctrinal publications, only MCWP 6-11 uses "family" in the sense of human relatedness, but restricts it to fellow Marines.
- **Families are a problem:** In MCRP 6-11c Combat Stress, families are identified as a possible source of stress, and a potential barrier to Marine readiness.
- **Largely Absent and Problem.** Both the quality and quantity of "family" language in Marine Corps doctrine reflects the institution's values hierarchy.

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Chapter 2: Analysis of Stress and Resilience Work

Stress: Variable, Social, and About Meaning

In the course of our research we found that Marines understand stress as primarily about meaning and how you count, both to yourself and to others. In that sense, stress is social, between the Marine and their community. Because stress is social, it's variable—what constitutes great stress for one Marine might be insignificant to another, and what one community of Marines agrees is stressful might be local to their mission and circumstances. But regardless of what particular Marines found stressful, the common thread was that their stress was about meaning: what kind of parent am I, what kind of Marine am I, am I a good person, can I live with how I'm living? We found that stress for Marines is less about survival, and more about self-worth: about the meaning they and they community assign to existence.

This means that stress is not primarily physical—Marines did not report stress as being about being physically or mentally taxed to a breaking point, like a piece of steel that deforms or breaks under pressure. This does not mean that the physical and mental are unimportant, because they can be fodder for stress. So, for example, a Marine officer at TBS, looking back at and critiquing his mental performance during an ambush—why did it take me so long to execute immediate action (IA), why didn't I recognize warning signs?—used his combat performance as content for stress about his worth as a leader of Marines. Similarly, falling out of a forced march—a physical failure—can be stressful because it means you're a "hump drop," and are not acceptable in the eyes of your community—a social concern.

But none of these decisions about what to be stressed about are universal or automatic. Marines report strong social pressure to accept community standards and ideas about how to demonstrate steadfastness, and while there is general agreement, any one Marine may well come to a different understanding of what is stress, or how to deal with stress. For example, a student drill instructor (DI) at Marine Corps Recruit Depot Parris

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Island (MCRD PI) told us that failing a test didn't stress him—all that mattered to him was graduation.

For instance I'll go ahead and throw myself out there and [they] can contest this. This entire course I could have cared less if I failed one test. I could have cared less if I failed one uniform inspection. They know I didn't study for one test since I've been here. I just so happened to do well on every test but I honestly did not care. Could not care less. –DIT MCRD PI Group Interview, 09/19/2012

The other student DIs objected to this in the strongest terms, not only that they themselves felt stressed at the idea of failing a test, but also insisting that one ought to feel stress over failing a test.

This is a good example of the social nature of stress—Marines decide what they are stressed about, in the sense that stress is not automatic or universal, and Marines exercise control over their actions. At the same time, they don't do this in a vacuum, but have to account for what their culture tells them should count as stressful. The student DI was aware of this—he prefaces his comment by acknowledging he's "throwing [himself] out there" by contradicting the common sense wisdom of the group. For this Marine and one other in a group of ten, not sweating the individual events lowered their stress level and allowed them to focus on the larger goal of graduation. However, for the rest of the new DIs in the group, feeling stressed about performance is a good thing, in that it brought out their best.

Qualities of Stress

The prior example of stress over testing points to an important distinction: not all stress is bad. Marines talked to us about stress that is clearly negative in their lives, degrading performance and hurting them and their families. But Marines also pointed out that stress can be beneficial, and be interpreted as a way to bring out your best. As one DI put it:

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Here at the school, sir, is a good example. A lot of times I've been stressed but thought it brought out the best. I could say one time was drill. Marching out for drill. Getting tested or whatever. It was stressful but because you did it so much through repetition...I think that's a big part of being stressed because you can become stressed but if you've already been in that same situation like staff sergeant was saying earlier, you can -- stress can -- eustress in a good way. -DIT MCRD PI Group Interview, 09/19/2012

In this case stress was manageable for this Marine because he'd "already been in that same situation," and felt prepared.

We found that a major qualitative difference in stress as Marines experience it was between positive expectation of top performance, and a negative feeling of unreadiness. Additionally, some stress seems indeterminate, where a Marine can point to being stressed, but has a hard time articulating exactly what's going on. We labeled these ways of understanding stress:

- *Eustress* (good stress)
- *Distress* (hindering stress)
- *Generalized Stress* (where Marines have a hard time putting a finger on how and why they are stressed)

Stress: Prepared/Unprepared

When Marines feel prepared for the demands they have on them (eustress), they often describe what they've experienced using words like "challenge" and "obstacle;" words that have connotations of forward progress and being surmounted. In eustress, Marines refer to their prior experience and training, or having expectations or a framework that match circumstances as having prepared them. When that happens, even tough challenges can be handled positively.

However, when Marines don't feel prepared for what's happening in their life they experience distress, and talk about "distractions," "burdens" and "rocks in your pack;" negative words that have connotations of hindering progress, opposed to eustress words.

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Marines discursively construct stress as being about forward progress, and stressors either help or hinder that progress:

If you have never been through anything that's been hard or that really will physically challenge you or emotionally challenge you your stress level is going to be through the roof. But if you've been through situations like that and you've acquired experience as to how to handle yourself and you already have an idea of what's to be expected your stress level is going to be extremely low because you already anticipated a lot of things happening. – DIT MCRD PI Group Interview, 09/19/2012

Marines experience this trained/untrained difference across their lives, from direct combat operations as well as in their homelife. Marines we spoke to could directly trace their readiness for combat to their prior training and experience, as well as their readiness for leadership challenges and preparedness to help others—very often a Marine would preface a story about how they helped another Marine manage stress with a story about how they themselves had once been in a similar situation, and how they had learned to cope. The important difference we noted however, was that when it came to steadfastness, Marines could point to abundant Marine Corps training and experience, but when it came to knowing how to be flexible, they generally pointed outside the Marine Corps' institutional formal training. *This means that Marines are generally prepared to be successful as Marines in the way the Marine Corps has defined it: combat and MOS preparedness, but may or may not be prepared to be Marines in other ways (wife, father, friend, etc.).*

For example, one Marine explicitly walked us through how recruit training taught him how to be steadfast, which prepared him for follow-on schools like the SERE-C course. In turn, SERE school made him even more prepared for both actual and potential challenges. For this Marine, the rigors of SERE school helped him be ready for OCS/TBS, as well as the environmental/operational demands of his first deployment during OIF2. But he also pointed to a failure at SERE school where he gave in to a "soft" interrogation tactic,

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telling us that experience of having failed in a training environment, and understanding why he resisted hard techniques (but gave into a soft one) made him feel prepared. Not only does Marine training prepare Marines to handle combat, the very experience itself adds to Marines' sense of preparedness:

But a lot of it is similar to what you've already been through. And same thing for any kind of combat experience. If you've been through a firefight one time that first time you go through the firefight you're stressed. I mean you are shaking. You're pale. You're flushed. You look like death warmed over. But the next time it happens you're not as erratic with your movements. You're more composed. –DIT MCRD PI Group Interview, 09/19/2012

So while Marines reported to us that they were well prepared by the Marine Corps to manage stress as it relates to combat preparedness, MOS proficiency, leadership billets, and other explicit demands of being a Marine, they did not report that about other areas of their lives. The same drill instructor who felt his combat arms training and deployment experience made him prepared, struggled to handle stress in other areas of his life, explaining how anxiety and stress sent him into a tailspin where he lost 30lbs:

an ex-girlfriend left me and I didn't know what the hell was going on and I had no closure, no reasoning as to what happened, and I just went into this zone and I was stressed out about it because I wasn't getting any answers, I wasn't getting feedback. And I just kept repeating it over and over in my head like what happened, what went wrong, what is going on. And then weight loss. [. . .] This was at a point in my life where I really didn't -- I didn't see how Marine training could apply to my personal life. And I was always of a mindset to keep the personal life separate from the Marine Corps because from an incident exactly like that I couldn't go to work and bring what happened at home to work. –DIT MCRD PI Group Interview, 09/19/2012

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Not only did this Marine fail to see how he could apply Marine Corps training to his personal life, he had a strong cultural belief that he could not draw on Marine Corps resources to help him. He was trying to live steadfastly, keeping the rest of his life at bay, even as it ate him up from the inside.

This does not mean that Marines as a whole are unprepared to deal with stress in the wider context of their lives. Marines told us that as they got older and more experienced, they could abstract out principles from Marine training and apply them to new contexts. Many Marines have prior experience from before they joined that helps them cope, often pointing to their parents as a source of strategies or principles. More rarely, Marines pointed to explicit training from the Marine Corps, i.e. a brief or class (2 out of 56 participants in the study did so). Generally though, Marines lean on prior experience and ad hoc learning to discover how to deal with challenges outside the official Marine Corps. Absent one of these prior experiences or ad hoc sources for dealing with stress, a Marine may well be on their own. Indeed, if they're struggling to deal with stress and because of performance become isolated within their unit, they may be on their own in a very literal sense.

Stress: Context-Dependent

The issue of preparedness points to the contextual nature of stress. To understand whether or not something is stressful requires a contextualized understanding of the situation and participants. For a drill instructor, whether or not a given event is stressful depends entirely on the context: how they understand the situation, and the particulars of the situation. For example, for one Marine, running the obstacle course in front of recruits may not be stressful, because they are well prepared for that particular context. But for a drill instructor that feels unprepared, their understanding of the context can be a great source of stress:

I believe that ultimately stress is self-induced. I can concur that not being technically proficient at something or being afraid of something can cause an issue type of stress but at the end of the day attitude is what's going to make a stressful situation. For example you can have an individual who is afraid of

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the obstacle course but doesn't -- or knows that they might not pass an obstacle at the obstacle course but doesn't really care. And then you might have the same individual who knows what the outcome is going to be and is really stressed because of performance level. So I believe that a large part of it is self-induced and is attitude-based on the outcome of things. -DIT MCRD PI Group Interview, 09/19/2012

So for each Marine, there is a contextualized understanding of how they are or are not prepared. Not having context-appropriate concepts or strategies can be very stressful.

An additional stress source that may undermine Marines is an inability to distinguish between contexts, and subsequent misapplication of concepts or strategies from a different context. For example, the recruits we interviewed (junior Marines when we interviewed them a second time) had clear uptake on how to be steadfast. They had discarded much of their prior civilian habits and attitudes, and were able to very clearly articulate how they had changed during recruit training, and point to concepts and strategies for being Marines, for pushing through hardship, for displaying fidelity, etc. When we asked these new Marines where else they might apply what they learned at boot camp, they enthusiastically explained to us how the strategies they learned at MCRD PI could be directly exported to the rest of their lives without any adaption. If family members complained about deployments or obligations, they could just learn to "just take a really big straw and suck it up." If a Marine got married, their spouse had better realize the Marine Corps came first:

But you know I guess the Corps makes you strong enough to you know to sit back and say you know and straighten out your priorities. You know, every Marine has, you know, their first duty in life, their first love is the Corps. You know, and I don't know how I'd deal with [a sick parent]. But, you know, the wife thing, you know, it is what it is. You know, this is your life. The Corps is

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your life. It's not a job. And most of the time either they get it or they don't.
–MCRD PI Recruit Group Interview, 10/01/2012

In these responses, there was no differentiation between the context for Marine living, and home and family living. These young Marines want to be good Marines 24/7, but it had not yet occurred to them *that being a good Marine means different things in different contexts.*

We think this ability to distinguish between contexts is comparable to the expectation for relatively junior Marines in the four-block war: e.g. to see that kinetic effects are the right solution in one context, but disastrous in another. In the same way, applying a solution that might work on a hump or during a patrol ("get a long straw and suck it up") with other Marines, might be disastrous as a preferred solution for talking with your spouse about stress over deployment and late hours.

Based on our interviews with staff instructors at OCS and MCRD PI, older, more experienced Marines figure out for the most part how to differentiate contexts, and many have come up with appropriate strategies for identifying and then navigating the switch between contexts. For example, a very common strategy is the use of symbolic acts to differentiate between work and home. Some Marines will always change out of their uniform prior to driving home, to give themselves a chance to switch gears; others will scrupulously leave their duty belts and covers in the car, never bringing them into the home. The reverse can be true as well—some Marines reported always changing into their uniform before reporting to their workspace, to make sure they didn't bring anything from home with them.

Stress: Social Self-Judgment

Stress as Marines experience it has a particular self-judgmental¹³ quality to it. Marines are hard on each other, enforcing high standards. Marines generally see this as a positive thing, and this kind of self-policing is important because it provides critical feedback to Marines about what they can and can't do. The community's judgment

¹³ Technically this is a kind of "social reflexivity," where the judgment members of a culture make bend back on themselves.

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provides a consensus understanding, for example about when it is legitimate to take a break, and when taking a break might be understood as selfish. This works in the opposite direction—Marines are often reluctant to take themselves out of the fight, even when they ought to, and so having other Marines give feedback (or enforce that feedback) can be invaluable.

The point is that Marines are constantly judging each other and being judged against Marine Corps standards, and this is an important communal practice oriented toward keeping Marines at their peak. Marine Corps Order (MCO) P6100-12 may tell Marines that 225 is a first class PFT score, but it's the social judgment of Marines in a unit or shop that pushes members to shoot for a higher score. *Thus the acceptable range of performance in the Marine Corps is more accurately found not in the order, but in the social judgment of Marines.*

Marines make it a habit to judge both themselves and the Marines around them. Marines often—but not always—take the social role of other Marines and play that role with themselves. This is a conversation where a Marine speaks to himself *as if* he were another Marine making observations about his performance. This is often not a formal process and usually not vocalized out loud. Rather, Marines, like all people, tack back and forth between “playing” themselves and “playing” others. and then respond to the imaginary other as themselves. both the talker and the listen.

One key quality for this kind of self-talk is the relative balance of idealism with realism and accuracy of resulting judgments. This kind of self-talk can be risky when Marines misunderstand or do not know how to reject an imagined or real community perspective. For example, a Marine who is dropped from a MCMAP Instructor-Trainer course because a badly sprained ankle prevents him from completing a swim qualification may have to *reject* the input of his unit when he returns. This can happen when Marines in his unit take an idealistic perspective on performance and criticize him as if a sprained ankle was nothing more than an inconvenience. The implication is that the injured Marine is using the injury as an excuse to abridge his steadfast pursuit of the difficult goal of completing the IT course. This is a fundamental mistake within the community of Marines

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because it constitutes slipping from striving for the ideal into holding other Marines accountable for not being the ideal.

There are other times when rejecting the voice of the community is a serious danger. For example when a combat-experienced Marine dwells on, and eventually makes a habit of, tearing himself for not bringing all his Marines home alive from a deployment. This is where Marines can shut out voices of reason, voices conveying the realistic message that such an expectation for actual performance constitutes slipping from striving for the ideal into holding oneself accountable for failing to achieve the ideal. The latter is self-defeating and so self-indulgent. It is generically unreasonable given that what makes an ideal an ideal is the impossibility of its realization in action.

For example, the Marine major quoted in the first chapter, concerned over how his performance during an ambush would be evaluated and represented in a popular book, judges himself more harshly than most other Marines would. In that incident, he was in the lead vehicle of a convoy, and the second vehicle was destroyed by a command detonated IED. The major (then lieutenant) was concussed by the blast, something he continues to blame himself for, along with other perceived failings. After the detonation, he reports being "stupefied by the blast" for approximately two minutes, and then:

And I knew I needed to take action. I knew I needed to do something. But for the life of me I couldn't process what to do and what was supposed to happen next. So we ran back to the vehicle. And we just started moving people and doing things. And we pulled -- the vehicle was on fire. So we pulled the casualties out... this pressure to perform was absolutely overwhelming. And to this day I think I performed poorly at best. Really, I've gone back through the actions and the scenarios. And I think, jeez, how many things I could have done differently or more quickly or more, you know, proficiently. -P1 STAFF TBS, 08/02/2012

There's no part of his performance as a leader he doesn't second-guess, and treat as a personal failure as a leader of Marines:

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Armchair quarterbacking this, I'm disappointed in the manner in which I responded. Very, very much so. I learned so much from it. But I carry a lot of guilt in that, you know, why did I select that route, why was I in the first vehicle, why had at that point I been turning the radio channel to report a checkpoint to battalion vice looking out my window as I should have been. You know, aware that the streets were quiet. Aware that these things were amiss. You know, all the signs that I knew to look for that either I didn't or just failed to really process. -P1 STAFF TBS, 08/02/2012

Interestingly though, the Marines around him don't share in his harsh judgment. In the popular book written by the platoon commander from the QRF that responded to the ambush, the lieutenant is judged as competent. The Major points out that he still speaks regularly to his driver and other Marines from that deployment, and they wouldn't maintain contact with him if they condemned him. The researchers had a chance to speak to Marines who had deployed with the major, and while this specific incident was not discussed, it was clear that he was held in the highest esteem by the Marines he went to war with.

This Marine's self-judgment and the judgment of the community are at odds. We note that there does not appear to be any overt training on this potentially critical intersection between personal and communal judgment. There is already formal acknowledgement that such a dynamic exists, for example when the Corps expects individual Marine, especially younger Marines, to "go against" their peers when the group is about to engage in something morally wrong or illegal, but we think much, much more can be done toward preparing Marine for the many variations and impact of this dynamic intersection of judgments.

To emphasize this dynamic we want to return to one of the most common variations of this intersection of judgments and the question of realist/idealistic expectations: the unrealistic expectation that a "good Marine" brings all of his Marines home alive. For

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example, a Captain at OCS told us about his attempt to mentor one of his Marines, and help him deal with his guilt:

Yeah, it was actually one of my staff NCOs here, one of the Gunnery Sergeants, just, you know, dealing with situations, and finally he got to a point where he respected me enough and trusted me enough that he could open up to me about stuff that went on at Afghanistan while he was there, and just how he felt like he could've prevented things from occurring, you know, brains getting blown up or this or that, and... You know, and I just -- we -- I wasn't there, of course, so I don't know all the full details, but we talked through it and, you know, he told me, you know, "I did, I did everything I thought I could and it still happened." And I said, "Well, you know, look at it from the flipside of the coin, Gunnery Sergeant. You could've, you could've done half that and it could've been even worse. You know, it could've been the whole convoy. But because you did everything you did, it might've only resulted in that one vehicle." But I think they just look at it as, "Well, I must've failed somewhere along the line for this to have occurred." And there are some things that you just can never prevent. At some level, friction, you know, can never be completely and utterly mitigated. -P10 STAFF OCS, 06/21/2012

One key issue is the unrealistic expectations for performance on the part of the gunnery sergeant for a performance in an environment which he does not, indeed cannot, control: warfare. There is a importance difference between holding yourself to the high standard of doing everything you ought to in preparation for and conduct of battle, and demanding an outcome over something you have very little control over in a combat zone, that is, casualties. We ask, rhetorically, "Where does such an expectation for performance come from, and how can we better align Marine pursuit of ideals with realism?"

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We also note that this Captain has not simply told his SNCO what to do, but also how to do it. Instead of saying something like "you need to get over it," the captain narrates a new way of thinking for the SNCO to judge his own performance, and so offers an alternative self-conception. *Implicit in this is that the captain recognizes that the gunnery sergeant is in control of his own stress.* He doesn't treat this as something that happened to the Marine, but rather as something the Marine is doing, and as a leader he steps in to offer guidance: a private, informal class on how to forgive yourself—or let go of a particular interpretation of the meaning of his experience—and move on. We call this ability to find and then use strategies and concepts for managing stress (such as learning to forgive yourself after failure, or finding a balance between being a Marine and being a parent) *resilience work.*

Resilience Work

Resilience isn't a quality or a trait, nor is it a quantity like gas in a tank, that can be used up. Our research shows that when Marines are trying to live with and manage stress, it's about *doing* something: they figure things out, learn how, get taught how to, or copy how to deal with things. Marines don't pre-posses a physical or psychological trait or quantity called resilience. Instead they acquire strategies and concepts from others or on their own, that they can then put into practice. Sometimes it's experience and learning from your homelife before joining the Corps, sometimes learning in the moment as you go along, and sometimes from a specific intervention from a leader or peer who helps scaffold your efforts to live with the stresses inherent in being a Marine.

Resilience then is an action, finding balanced ways to live in stress. At the heart of that stress are two competing demands: the demand as a Marine to be *steadfast*, and the demand as a person to be *flexible*. Starting at recruit training or OCS, Marines learn to be steadfast in their commitment to the Marine Corps as an institution, its core values, and most strongly, fellow Marines. Steadfastness looks different in different contexts, but it is essentially a values orientation that puts the Corps, and the Marines around you that embody the Corps, ahead of yourself. Steadfastness is treating a posting at MCRD PI or OCS like a deployment. It's pushing yourself on a hump in training until you go down rather

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than lose unit integrity. It's going out on patrol because you want to be with your buddies and share any danger with them. Ultimately, it's losing your leg below the knee to an RPG but continuing to fight your weapon and call out ADRACs to the rest of the squad, while your buddy in the vehicle ties your leg off with a belt tourniquet.

This commitment to a Marine ideal can be in tension with Marines' personal need for flexibility. Marines have other commitments in their lives beyond the Corps: they are parents, spouses, children, and friends. They have physical and emotional limits, and many of them want to develop and grow in ways outside of the Corps, that is, commitments to self. The tension is that Marines generally aren't a little bit steadfast, or partially committed. The kind of steadfastness Marines need for the battlefield is close to absolute, and for those who give their lives for their fellow Marines, they have lived steadfastness absolutely. But that steadfastness has consequences if there is not some sort of balance with flexibility. The Marine who decides to treat being a drill instructor like a deployment is also asking their family to do the same thing—they're asking for flexibility. Marine families are often ready to do this for a number of reasons: they value their Marine's service to the nation, want them to excel in their career, or enjoy being part of the wider Marine Corps family. But the Marine who asks their family to do this for every posting may be putting that family relationship at risk. The Marine who does so every time there's a choice between staying at work for a few more hours to make sure your Marines are taken care of, and coming home to make sure your family's taken care of, may be creating intolerable stress in their life:

Yesterday [my wife] had a doctor's appointment. And I told her a week ago. I looked in my calendar and said I can come home and watch the kids. And I never do that... So I had every intention to go home yesterday. I actually drove home ready to watch the kids. Got there. And I'd already known that I was going to miss a class that I wanted to see. And as an instructor that's -- he belongs to my section. I'm responsible for his development and future slating. It's a sergeant that was teaching with him that I murder-boarded...

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And I realized I was going to miss that class. And I told her I can't stay here. I'm sorry. I have to go back... And she wasn't happy... But that is the level of commitment that all Marines have. That's not just me... I just had overwhelming sense of guilt standing in my kitchen at 1300 thinking that I was going to spend the rest of the afternoon on the porch running around outside with the kids you know sitting in the sun whatever. But I couldn't miss this. Because it was going to indicate to the sergeant and to the captain that were teaching that like our new boss, our new section head... My wife had a doctor's appointment. I always miss these things. -P1 STAFF TBS, 08/02/2012

The "overwhelming sense of guilt" this Marine voiced to us reflects the tension between steadfastness and flexibility, because the expectation of absolute commitment in the former leaves little room for the latter.

This does not mean there is anything wrong with steadfastness. Marines need to learn to and practice being steadfast, because it's at the core of Marine prowess in battle. Our success as a Corps is a direct result of the cohesive willingness of Marines to work together and place the good of the group above self. At the same time, flexibility is good: Marines need the support and love of their families, need to develop in holistic ways as people, and have to recognize their limits and have periods where they rest and refit. Thus steadfastness and flexibility are both good, and the trick lies in finding livable ways to balance them out, because it is the nature of being a Marine to require steadfastness, and the nature of the being human to need flexibility, and so there will always be stress for Marines. The perpetual tension points to two things:

- 1) Balance in this case doesn't mean "equal," but rather "livable."
- 2) Marines are going to experience stress, and so the goal should not be to try and eliminate stress, but rather constructively deal with stress.

Marines can't (and likely shouldn't) balance out steadfastness with flexibility in the sense of an equal commitment to both. Marines have chosen a special, very difficult and

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meaningful way of life that demands a special kind of commitment. Civilian ideas of work/life balance reflect a very different context, and much lower stakes: no one dies at the office if you take too many coffee breaks¹⁴. Marines, even though they must account in some livable way for flexibility, will always tip the scales in favor of being steadfast.

Also, Marines' natural state is a stressful one. Navy/Marine Corps COSC doctrine centers on the Stress Continuum, a "model that identifies how Sailors and Marines react under stressful situations. It is the foundation of Navy and Marine Corps efforts to promote psychological health¹⁵." This model pictures stress as a continuum from a baseline green "ready" to a medically unfit red "ill":

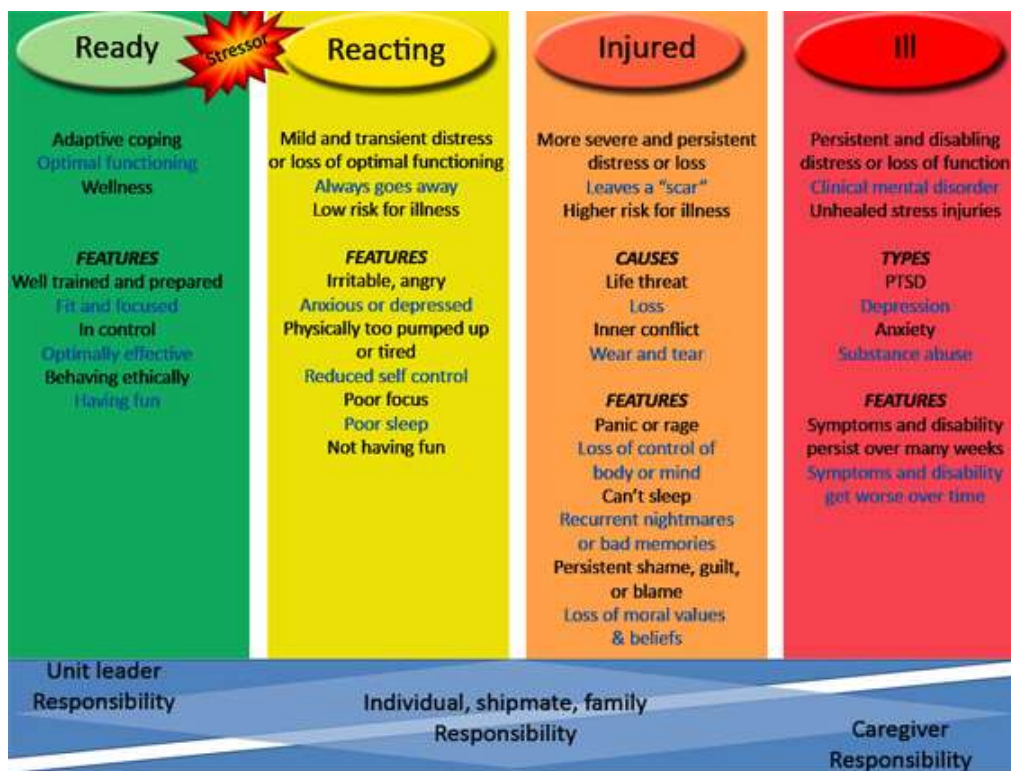


Figure 2. COSC continuum with a goal of "getting back to green."

In the COSC continuum, the goal is to move Marines back into the green after a stressor (a specific, time-bound event or "boom") through leadership or medical interventions, or as they put it: "Green is good. Go for the green!" This reflects a medical perspective:

¹⁴ We recognize that paramilitary civilian workers like firefighters and police do experience substantial bodily risk in their work, and thus share a stake in creating a cohesive force that is steadfast.

¹⁵ <http://www.med.navy.mil/sites/nmcsc/nccosc/serviceMembersV2/stressManagement/theStressContinuum/Pages/default.aspx>

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caregivers who are trying to help Marines who are suffering, and so imagine that if they heal a wound or illness, Marines can "go for the green!" However, our research shows that Marines don't ever live in the green, and shouldn't. A Marine who is "in the green" and not experiencing stress likely isn't trying and doesn't care: they aren't committed.

We offer instead a more realistic understanding of how Marines live in real life: perpetually living with stress, and trying to manage it. Fig. 2 below reflects our understanding that balance isn't equal, and that Marines "live in the yellow":

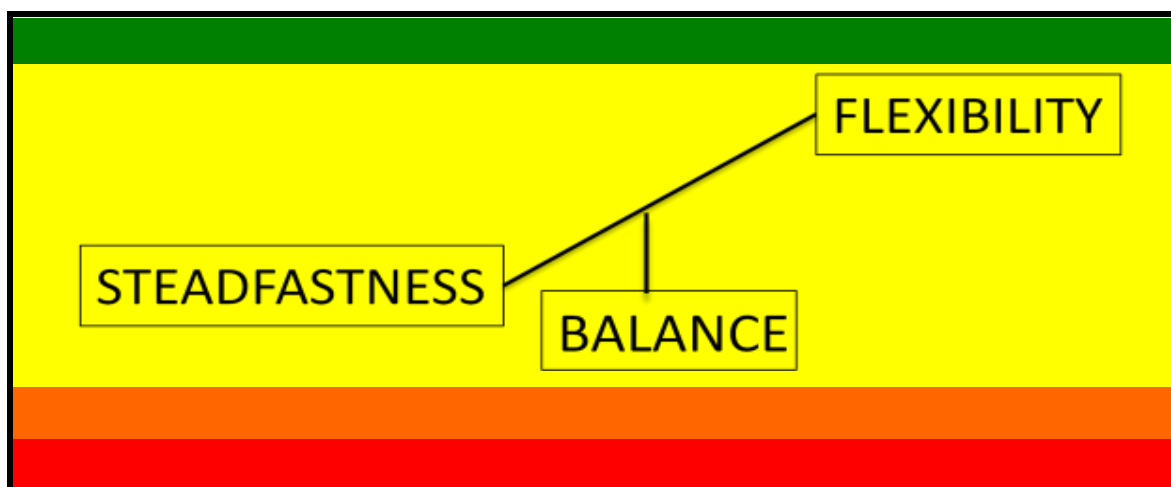


Figure 1. Resilience work as a livable balance between being steadfastness and flexibility, set against the Combat Operational Stress Control (COSC) color codes.

In this sense, problems occur when Marines tip too far toward steadfastness, to the point they move out of the yellow¹⁶. One important implication here is to resist the urge to associate being steadfast with being green, as if being rigidly and uncompromisingly steadfast is a way of being maximally ready physically, socially, psychologically, and

¹⁶ The opposite of overbalancing into the green occurs, but much more rarely: Marines told us about other Marines who malingering and thus burden the group, don't care (thus experiencing less stress and doing an unsatisfactory job), or even show cowardice in battle.

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physically. Instead, resilient Marines are constantly doing work, finding local solutions to the tensions in their lives, doing what we call *resilience work*, the active management of stress through concepts and strategies to make it livable.

The good news is that we found a lot of resilience work happening. Most Marines know how to do resilience work, and junior Marines who need help often have leaders and peers who scaffold their efforts to learn. We believe that is why Marines are so successful despite the incredible demands put on them, and why the vast majority of Marines can go on multiple combat deployments and live well. More can be done, however, if the Marine Corps thinks that it is worth rethinking its conception of the appropriate content for basic Marine training. This work needs to be supported and practiced with close to the same frequency and attention to detail as casualty evacuation and sighting weapons.

The next chapter describes the context Marines learn to be steadfast and flexible in, including the institutional factors that support both steadfastness and flexibility, and that help Marines to do resilience work. We also identify gaps in training and doctrine for the support of resilience work. Much of the work Marines do to manage stress in their lives is local, private, and ad hoc, and we identify best practices that support resilience work, which can be usefully incorporated into training and doctrine. We also offer a set of specific recommendations the Marine Corps can take action on to better support those Marines who need help learning to do resilience work.

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Chapter 3: A Discussion of the Dynamics and Context for Stress & Resilience Work

Overview of Resilience Work Context

The context for learning to be steadfast and flexible in the Marine Corps can be roughly divided into two realms: a more public realm of formal and institutional support for steadfastness, and more private, ad hoc, and informal realms of local support for flexibility. The former is reflected in the institutional language at places like OCS, higher-level Marine Corps doctrine, and the programs of instruction (POI) at Marine schoolhouses. The latter is generally found in local community wisdom at various commands, the private talk and practices between Marines and their leaders and peers, and Marines' private self-talk and understanding. However, we do note that there is flexibility training at the formal, institutional level of training as it relates to combat and operations.

Marines are encouraged to recognize and apply context appropriate solutions to certain kinds of problems. For example, Marines are explicitly asked to practice flexibility by recognizing and adapting to different contexts in the Four Block War concept. Recognizing and adapting requires judgment. While the traditional idea of Marine combat has been the aggressive use of kinetic force in offensive operations, we expect our sergeants and lieutenants to account for strategic concerns at the tactical level, for example to understand that while they were engaged in combat operations the previous night, they might be rendering humanitarian aid in the same locale a eight hours later. The concept of the strategic corporal and actual evidence from the late wars in Iraq and Afghanistan both point toward judgment being pushing further and further down into the ranks. Similarly, Marines exercise judgment and make context-sensitive adaptations when they decide that successful partnering may mean lowering their explicit security and showing trust in partners—a combat way of seeing that sometimes less is more.

However, when it comes to recognizing contexts and then adapting, switching, or innovating new strategies for non-combat contexts, Marines rely less on formal training,

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and more on their own resources. This does not mean that the Marine Corps has failed to address the needs of Marines outside of combat. The Marine Corps does offer support and programs of great value to Marines, *but such support doesn't constitute resilience training*. For this reason our study did not include *programs* and *services* the Marine Corps offers to support Marines and their families.

We believe programs such as the Substance Abuse Program, and Readiness and Deployment Support, are valuable and meaningful in the lives of Marines, but these not training. So, for example, helping Marines and their families prepare critical documents, set up an emergency communication plan, and identify services, all prior to deployment, is necessary. But it's very different than training a Marine in *how to find time* to prepare the documents, set up an emergency communication plan, and identifying services while putting forth 100% effort at his unit during pre-deployment training.

This is not simply a time management “problem,” it is a values management and social relationships issue that requires judgment. “I don’t have time to pay attention to non-combat and non-operational considerations,” has been an unspoken backdrop to many of our conversations with Marines. *That* such resources are available is an excellent step. But, to explain to Marines how to find the time to address them (especially during the busy time prior to deployment, even as the Marine is trying to commit time to his or her family or friends), why the effort is as important as formal, institutional pre-deployment training, and sensing that commands support time spent on such efforts is another thing entirely.

Resilience Work: How To, Not Just What To

Because Marine culture is focused on combat, and institutionally demands steadfastness almost exclusively, Marines are taught not only *what to do*, but also explicitly *how to deal* with **certain** kinds of stressors. In terms of combat and combat-related problems (such as what to do in a near ambush or maintaining helicopter electronic equipment in a remote environment), the Corps reasonably expects Marines to talk and act in the appropriate way because it explicitly teaches Marines how to deal with these types of stressors.

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However, there are gaps in training for stressors beyond combat, or for stressors that can't be addressed in public/institutional venues. For example, Marines that have difficulty fitting in socially in their unit, or that have a special needs family member, may experience significant stress. Such stressors don't get addressed in training with the kind of explicit "how to" that combat stressors do. Additionally there are restrictions on public speech that may inhibit such training. For example, one Marine shared with us the difficulty of reintegration for snipers from the Scout Sniper Platoon (SSP) he commanded in Afghanistan. He pointed out the inherent difficulty for Marines switching from a context where it is permissible (and encouraged) to kill a ten year old child acting as a combatant, to a civilian, CONUS context where deadly force is almost completely reserved for law enforcement, and such force is almost inconceivable against a child. For this Captain, trying to talk his Marines through this was a solitary and difficult task. We would point out that part of the reason this sort of work is private and ad hoc is because there's no way the Marine Corps can explicitly talk about the use of deadly force against a child. Outsiders who lack the experience and expertise to understand the context of such a discussion would inevitably misunderstand, and see this as an expectation or satisfaction with killing a child. Only Marines, who experience the incredible difficulty of simultaneously trying to keep their comrades safe and live out their ethics could understand how terrible a dilemma such a choice is. There are a range of topics that Marines can't talk about explicitly in public, formal discourse and training.

And so the primary way Marines learn to deal with these *within Corps examples* appears to be through prior experience, learning, self-awareness, and local, private social support. That is, Marines are learning to deal with such stressors – learning to be resilient – on their own and from other Marines, on an ad hoc basis. We found no doctrinal manual, POI, SOP, or any other official document covering such stressors.

Since this is an ad hoc process, the results and quality of teaching – and so the ability of the Marine facing the stressor to be resilient – becomes a matter of the quality and knowledge of a local Marine peers, subordinates, and leaders as well as of the Marine him- or herself. So whether and how well a Marine is able to learn how to balance steadfastness (achieve the mission and safeguard fellow Marines by shooting through a child combatant)

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with flexibility (I can and ought to forgive myself for having shot the child) becomes dependent on the time, knowledge, care, and quality of, say, the unit chaplain, the Marine's best friend, the company gunny, and/or the platoon leader. Of these, only the Chaplain will have had explicit training. And even then the individual Marine's opinion of the quality of any of these persons may ensure that she or he does *not* engage in any meaningful or deep conversation and so, ultimately, fail to be resilient. We cannot forget the critical importance of the moral standing of persons, regardless of rank, in the local moral universe. We heard stories of Marines who were ordered to see one or another of the persons above without anything productive coming out of the meeting. The main reason often centered on the person being held in low esteem by the Marine.

In short, resilience in terms of these types of within-Corps stressors becomes highly variable because there is no official "how to" or even rudimentary guidance available, nor is there any sense of what counts as "success." If the Marine walks away from an interaction with a fellow Marine with the idea that he should just "suck it up, the gunny hates you," and does so, is this to be counted as a success? It all depends on the question. If the context was a Marine having a problem with his gunny on a combat patrol, then "suck it up" may be counted as a successful strategy for staying resilient. But if the context was the Marine asking for some leeway from the gunny to handle an issue at home, "suck it up" may be counted as an unsuccessful strategy for staying resilient. This situation appears even more tenuous for stressors *outside of the Corps*.

To provide context for our recommendations, the rest of this chapter walks through the two locations and multiple modes for Marines to learn to be steadfast and flexible. On the one hand is the formal, institutional ways Marines learn steadfastness as their primary orientation through the institutional language of training environments, in Marine Corps doctrine, and in the POI of Marine schoolhouses. On the other hand is how Marines learn to be flexible, in the ad hoc, informal modes of local community wisdom, leader and peer coaching, and self-talk.

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Overview of Institutional Language at OCS

One of the opportunities Marines have to learn about steadfastness and that steadfastness should be their primary orientation, is through the institutional language at places like OCS. As part of our research, we conducted a mixed-method analysis of the institutional discourse at OCS. In the first part, we used linguistic software to generate a quantitative, statistical description of language at OCS used in official documents. This in turn led to qualitative discourse analysis of the linguistic patterns we found, patterns that tell potential Marine officers that being a Marine is solely about duty. We think this is significant, and sends junior Lieutenants off to TBS with a powerful message about how they should be if they want to count in the eyes of the institution. We suspect that an analysis at MCRD PI would yield similar results, but have not conducted such a study—this was a pilot meant to validate the method.

Our linguistic analysis at OCS reveals a discourse of *transformation*: an institutional narration of a certain future that is the result of a process of change, which positions those who are changed as *patients*—that is, entities without agency that undergo, rather than effect their own, transformation. This is significant because an institutional discourse of how “Marines are made” (a kind of manufacturing language) does not ascribe or acknowledge agency in Marines and Marine aspirants. In essence, however, transformation masks a highly circumscribed choice: if you want to be a Marine, you *will* act in these prescribed ways. This issue of agency in Marine identity has implications for attempts to institutionalize resilience training: a top-down program that treats Marines as things to be processed has very different implications and delivery possibilities than a conversation about Marine culture that invites participation.

Additionally, this transformation is primarily restricted to being combat ready, which is understandable given the Marine Corps’ focus on combat. This raises the question though of where the Marine Corps includes any formal talk and training that teaches or invites Marines to work out ways for balancing steadfastness with flexibility. To answer this question, we recommend additional computer-aided analysis of institutional texts at other schoolhouses (i.e. TBS, SOI, and the recruit depots) to better capture current Corps-wide institutional discourse for training. When the Commandant tells Marines that it’s a

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matter of readiness to seek help for stress in the same way the Marine seeks help for a broken bone, he does so in the context of the institutional discourse across the Corps. A more complete understanding of the Corps wide training discourse will give Marine leaders context for their attempt to destigmatize the choice to seek mental health, domestic, and other kinds of counseling.

Analysis of Institutional Language at OCS

Our analysis began with a quantitative description of OCS documents that community members identified as most representative of their institutional discourse.¹⁷ This in turn revealed structural aspects of text at OCS not visible through ordinary human reading: a holistic picture that human readers can't get because of memory and attention limits/variance. This quantitative description then opened the door to qualitative analysis: carefully combing over the big picture to find what's interesting and relevant to the research goal.

The quantitative analysis showed several language classes where language from OCS differs from a comparative corpus of general English in consistent, statistically significant ways¹⁸. This difference is plotted in figure 3 below, charted by means of 39 different language patterns. Statistically significant higher means for the OCS corpus are charted on the Y-axis in orange, higher means for general English charted in red on the X-axis, and means that did not differ significantly were not charted:

¹⁷ 10 Week Commissioning Program of Instruction, 2012 SOP, 2012 Candidate Regulations, Outtake from Candidate Outline, History IV Class

¹⁸ Please see Appendix B for more detail on method and data selection, and for selected raw statistical data.

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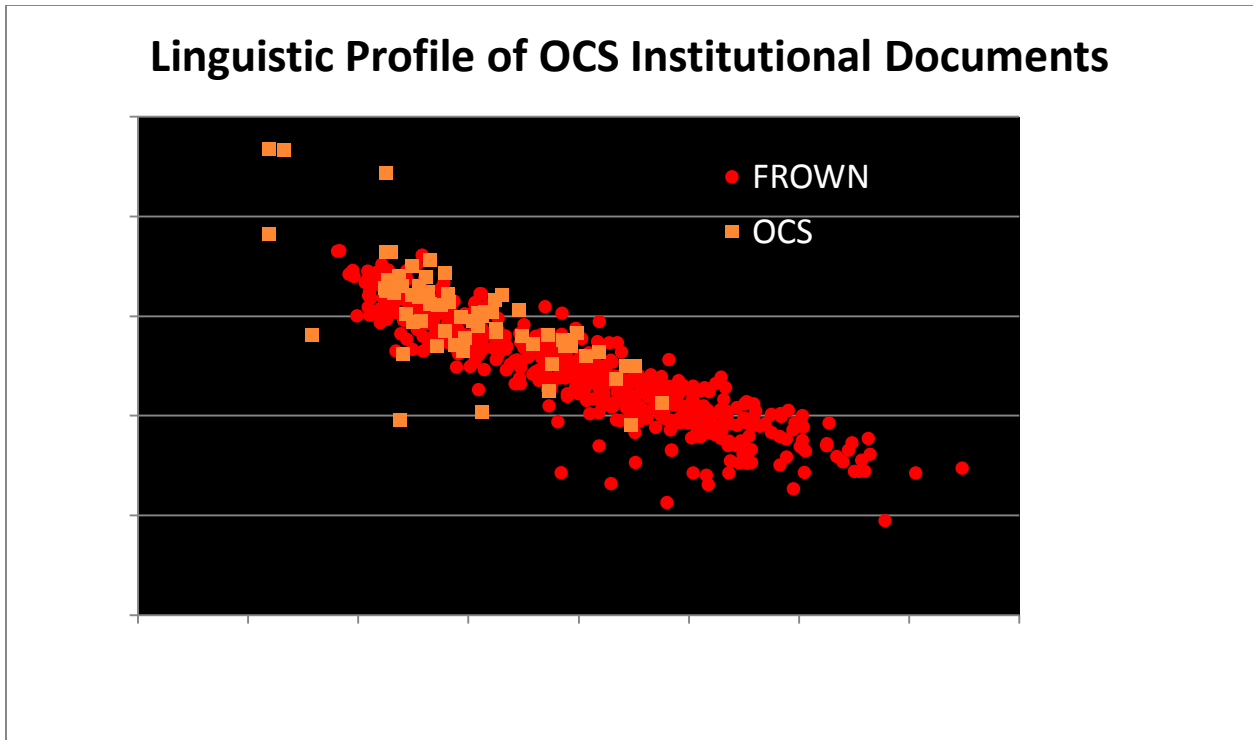


Fig. 3 OCS (orange, Y-axis) vs. FROWN Corpus (red, X-axis), charted by statistically greater means.

This chart shows how OCS documents are distinctive and coherent: a cluster high and to the left, reflecting a particular linguistic style. This is not a surprising finding given that these documents have a very specific context and purpose: the screening and evaluation mission at OCS. The specifics of this style though are interesting.

Much of the OCS corpus' distinctiveness likely reflects genre: like any institutional document that lays out policy and procedure, it is high on language about abstract thinking, citation, public sources and responsibilities—the orange points in Fig.1 overlap institutional texts from the general English corpus. The focus in the OCS corpus on values (both positive and negative), directives and insistence, and on person class (*Candidate, Marine, Platoon Sgt.* etc) are likely tied to the fact that the Marine Corps is a values driven, hierarchical institution. Of particular interest though for our purposes is the heavy emphasis on future talk, process change talk (language describing change over time), and the linguistic certainty of such talk. The text below is a sample from the OCS corpus that has high levels of both future and process change talk:

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PROPER UNIFORM WEAR. 1. General. Candidates **will be** issued uniform clothing and **will be** responsible for its care and proper fit. The Candidate Regulations provide guidance for the proper wearing of the candidate uniform. 2. Boots. Only boots authorized by Marine Corps Uniform Regulations **will be** worn at OCS. Boots **will be** worn free of dirt. Particular attention **will be** paid to the portion of the boot that rubs the Achilles tendon. Training companies **will** establish a boot break-in period, which **will commence upon** pickup, **will be** time progressive, **will** provide for alternate wear of both sets of issued boots, and **will** provide sufficient time for candidates to rest their feet out of boots. Company Gunnery Sergeants **will be** responsible for publishing a company boot break-in schedule. This boot break-in schedule **will** cover a period of no more than three weeks. Candidates **will** wear boots **continuously beginning** Monday of the **third** training week, except as noted in the training schedule. Platoon staff may place those candidates still having blister problems (**after the first** training day of week three) in tennis shoes on a case-by-case basis. All boot exchanges through Cash Sales **will be** permitted until the end of week three.

OCS sample text with future (orange) and process change (blue) talk marked.

This sample is marked by talk about what "will" happen and what "will be," orienting the reader to the future. This future is also narrated as a process of change—future occurrences are anchored in a process that has a start date, is ongoing and continuous, and is ordered successively by weeks and days. This future process is marked by certainty as well: consistent epistemic modality use of the auxiliary verb "to be" (note "will be" rather than "may be," "could be," or "should be"), without any hedging language ("hopefully," "ideally" "we think") creates a linguistic stance of epistemic certainty via syntax. In discourse analysis these are "syntactic claims to certainty," and can be thought of as a linguistic stance¹⁹ towards truth and knowledge. Finally, the objects of the process (candidates) are linguistically positioned as patients²⁰. In the above sample, "training companies," "Gunnery Sergeants" and "The Candidate Regulations" are agents and *do* things; "Candidates," even when they are the grammatical subjects of the sentence, are

¹⁹ *Stance* means a linguistic orientation or attitude, so for example using words like "alleges," "claims" and "purports" to represent another's words, constructs a stance of skepticism.

²⁰ Semantic analysis differs from grammatical analysis: instead of grammatical categories like "subject" and "object," semantic analysis includes categories like "agents" (who *do* things) and "patients" (who have things *done to them*).

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patients who have something *done to them*. This linguistic positioning goes beyond the uniform regulations example above, and is consistent throughout the OCS corpus.

This linguistic positioning of candidates as patients discursively circumscribes their agency while laying out the results OCS staff are supposed to produce through the transformation process. While the semantics leave candidates no choice, from a larger social science perspective we know that people are not robots, and do make choices. In this case, the choice is to accept or refuse an invitation to fulfill an implicit institutional demand of duty. The explicit portion of the message is a series of predictive demands that *will be*. The invitation then for candidates is to orient themselves toward acting in prescribed ways, which amounts to restricting their own agency on behalf of enacting the Corps': always on time, in the right uniform, successfully completing each training evolution, and so on. Thus in addition to explicit training goals and standards, there is implicit habitual practice for enacting values: practicing how to be self-sacrificing for the group. There are many layers to this: practicing being committed in the face of inane repetition, in the face of shouted negative appraisals, or even in the face of impossibility (i.e. four hours of work and two hours of time).

This is not to say that the linguistic strategies in OCS documents are wrong or illicit in any way. It is understandable that regulations for OCS offer prescriptions to those aspiring to be Marines, and the habits of commitment described above appear to reflect the Marine Corps' understanding of why it has been so successful in battle. This does however have implications, particularly because these documents in aggregate represent OCS as an institution that takes candidates, does things to them, and through this process transforms those who aspire to be Marine officers. This consistent way of speaking makes visible a template for understanding how OCS as an institution understands its mission, because the particular language of these documents is neither required nor random. We do not know how self-aware and deliberate the various authors of OCS' institutional discourse were as writers, but we suspect that as experienced, expert Marines, they understood their own culture well enough to evoke their sense of "how Marines are made." It's our role as social scientists to show how this is accomplished (i.e. through a very consistent, subtle kind of language use) and its implications.

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In our ethnographic research at OCS and MCRD Parris Island, Marines don't generally describe themselves as the product of a process, but as decision makers, who have value orientations, are self-aware, and are active in constructing their identity and relationships, and so there is a disconnect between how Marines understand themselves, and how OCS' institutional discourse represents them. This narration of transformation is a kind of circumscription of the person solely to their identity through commitment to duty, without space for personal life beyond the Marine Corps as a spouse, parent, friend, etc. If resilience is balancing out steadfast commitment to duty with a flexible understanding of human limits, then attempts to institutionalize resilience must account for how the Corps' training discourse is restricted to steadfastness, and how this discourse does and does not address being a person beyond the Marine Corps.

Steadfastness in Marine Corps Doctrine

We conducted an analysis of doctrinal publications to understand how the Corps positions Marines relative to their other commitments. Based on our interviews, we believe family represents the single most significant extra-Corps commitment for Marines, and so used the word "family" to test. We found that in top-level Marine Corps doctrine, family is largely ignored, but when it is considered, the word is restricted to relationships between Marines, while the family you have back at home only counts as a negative source of stress. Marine Corps doctrinal publications on religious ministry do address family, but however strictly from the perspective of supporting combat-readiness: family existing to support the warfighter.

"Family" in the sense of human relatedness is generally absent from Marine Corps doctrine. The Corps' central doctrinal publication, MCDP 1 Warfighting uses the word "family" a single time, in the sense of "family of equipment." Family is used in the sense of connectedness in MCWP 6-11 Leading Marines, but there the word is restricted to mean fellow Marines: "Those men on the line were my family, my home. They were closer to me than I can say, closer than any friends had been or ever would be. They had never let me down, and I couldn't do it to them" (MCWP 6-11 p. 15). Family is used in MCWP 6-11 a single time in the ordinary sense of family back home, but only as a counter to the deeper

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bonds of Marines, as something Marines *don't* fight for, i.e. Marines don't fight for their families, but for the sake of other Marines.

Another way Marine Corps doctrinal publications present families as lesser or problematic is in MCRP 6-11c, where families are positioned as a source of stress and potential burdens. Family stress is therefore to be dealt with because it detracts from combat readiness: "Family stress adds to combat-imposed stress and causes distraction, interference with performance of essential duties, and a negative impact on stress-coping ability. This will result in the unit's inability to perform at peak" (MCRP 6-11c p. 39).

While MCRP 6-11c does address the importance of family support, it is for the sake of the Marine Corps, dealing with a problem. So for example the publication addresses the important issue of family reunions after deployment:

Unit officers, staff NCOs, and NCOs, assisted by the chaplains and mental health/CSC teams, prepare the Service members for problems encountered during family reunion. For example, most Service members expect to resume roles and responsibilities they had prior to separation. However, their spouses often resist giving up their new roles as decision makers and primary home managers. Also, a spouse may feel that his or her sacrifices during the Service member's absence have gone unrecognized. *This feeling becomes an additional source of tension.* (MCRP 6-11c, p. 46, emphasis added)

While this passage addresses a serious issue, and the clear intent is to help families with reunion, we also note that families are marked here as a source of tension and problems—families as a burden for their Marines.

Family is treated differently in religious ministry publications (the 6-12 series of publications). In these publications family figures more prominently, and is not positioned as problematic. We do note however that family and family support in such publications is consistently about family *as it relates to readiness*. This is a good example of what we mean by flexibility marshaled in the service of steadfastness—it's as if families exist to support the Marine Corps' warfighting mission, not as valuable relationships in their own right. In the same publication, Religious Ministry Teams (RMTs) have "a positive impact on readiness, moral, and family support issues"—family readiness is about supporting the

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Marine Corps. This continues in other publications, so for example in MCWP 6-12 families receive religious ministry support as part of Marine Corps readiness, in MCRP 6-12a loving self and family are offered as a pre-combat devotional topic, in MCRP, and so on.

Steadfastness at Marine Schoolhouses

Marines also have a chance to learn and practice strategies to be steadfast through the POIs of Marine Schoolhouses. At places like MCRD PI and OCS, new entrants to the Marine Corps are introduced to a new value orientation²¹ and then given ample chance to practice it through training. Training like drill, martial arts training, PT, training hikes, field exercises, etc. all give recruits and candidates a chance to learn how to push through adversity and challenges, and the Marines we spoke to consistently pointed to this kind of training as being valuable and effective in preparing them for combat readiness. This training is also a way to learn and practice Marine culture.

We believe the most salient difference between civilian and Marine culture is that civilian culture allows for self-centering, and Marine culture demands other-centering. So in US civilian culture, an explosion that rips off your leg means you should scream for help, go into shock, etc. *because your life and well-being are threatened*. However, in Marine culture, to people with the exact same physiology as civilians, an explosion that rips off your leg means continuing to fire while calling out ADRACs, or tying-off the stump of your leg with your web belt, jamming your stump in the dirt, and firing your rocket launcher, etc., *because the life and well-being of other Marines is threatened*. This is the essential cultural difference between Marines and the civilian pool they recruit from: cohesion. New Marines must go through an acculturation process to learn this way of living for others, and they do this through training. But because we can't reproduce combat conditions in training in a safe, acceptable manner, the Marine Corps must use physical events to index moral qualities and values.

Training hikes are an excellent example of this sort of training, because they hinge on cohesion: while conditioning plays a contextual role, Marines understand it is ultimately

²¹ Relative to US civilian culture in general. We note that any given entrant may well have a family background where they have been introduced to the kind of commitment Marines value, have experience in team sports that provides a base, etc.

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a matter of deciding which matters more: the pain in your feet/back/knees, or keeping faith with the rest of your unit. Thus a training hike allows Marines to do two things: red-flag those who don't act out Marine cultural values, and let those who have not fully embraced these values get practice and become more acculturated. Thus regular hump-drops can be flagged either for separation in some cases, or in others for social separation as untrustworthy. Additionally, Marines are afforded chances to practice being steadfast during these humps, and push themselves, while also affording those who have previously failed to redeem themselves. This points to another dynamic in training hikes: a positive "pull" from the cohesion bonds and sense of accomplishment that those who suffer together and achieve their objective experience, along with the negative "push" of being shamed for failing and being labeled a drop.

Learning Flexibility: Community Wisdom, Marine to Marine Talk, and Self-Talk

While steadfastness training is mainly found in institutional, public talk and training, most flexibility work (except that which is explicitly linked to combat) is located in relatively private and local talk and training. At MCRD PI and OCS, we found that members have local community wisdom about how best to navigate their rigors. We also found ample evidence that Marines, and thus the Corps, depend on local, ad hoc mentoring from leaders and from peer to peer. Finally, when interviewed, Marines were able to walk us through their own private self-talk and understanding as they try and resolve the limits and contradictions of being a good Marine and having other commitments.

Being a "third hat," a new, junior DI at MCRD PI, is an illustrative case of how local community wisdom provides Marines with "how to" flexibility training. DIs uniformly told us that all three stages of being a DI (senior, heavy, and third hat) are stressful, each in different ways, but that the exhausting physical output of being a third hat, combined with being a novice, is an incredible challenge. They survive though because the community has a store of local practices. So for example, all DIs know that having your wife bring you a sandwich in the afternoon and then sitting in the car with you for 15-20 minutes, is critical both to the functioning of the Marine, and to the marriage. Another important strategy is taking naps when recruits are in classes and being supervised by the instructor cadre.

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These experienced Marines (mostly NCOs, some SNCOs) have never encountered the idea of taking a nap during duty hours, and we note that Marine Corps tradition forbids "feet on racks" during the working day as a push towards steadfastness. But through observation and modeling they learn what the community knows is an acceptable and valuable practice *for a DI who is pulling their weight*. Additionally there are many ways SDIs exercise judgment to support the resilience of their third hats, without directly telling them. Sending a junior DI to get mail, telling them the staff "needs" them to make a PX run, assigning them to laundry detail, are all ways more experienced Marines use implicit teaching to help their juniors figure how to, and just as importantly, when they can, be flexible. As one SDI put it:

And they send me on a PX run, or have me go sit down and drink water, whenever I was that guy who was the one to be sending ones, I remember what it felt like. And I could easily pick out the ones who needed that break. And so, it's like, I learned it because it happened to me. And then, when it was my turn to do it, I made sure that I paid attention to things like that. –P5 SDI MCRD PI, 07/09/2012

The implicitness of this sort of flexibility work and training has the important function of reserving discretion for seniors. Thus seniors can choose whom to give breaks to, and decide when not to give breaks because of immediate op-tempo demands.

Senior and peer talk between Marines is another way Marines learn to be flexible. An example issue Marines face is how to effectively teach previously good performers who have erred significantly how to rehabilitate themselves, or if that is not possible, finish their tour honoring their commitment as Marines. The paradigm case for this is the young corporal who is a good Marine, but makes a mistake that leads to NJP. In this case, the institutional answer of steadfastness may fail the junior Marine—how do you fix yourself if the institution (and yourself) classify you as a "problem child" or "dirtbag?"

Because there is no formal, institutional training on how to recover from public failure, Marines depend on this kind of local, personal leadership to tell them "how to":

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*I had a Marine that got a DUI...so she always come to work squared away, but after she got in trouble she didn't come, iron her uniform. She showed up late to work. She didn't want to do duties and things like that. **She just lost all motivation.** So we pull her in and talk to her, "Hey look, you know what? You can recover from this. I've gotten in trouble before," and I use that as an example. "Hey, I've gotten in trouble. I still got promoted from getting that. Just because you got a slap on the hand doesn't mean that everybody's going to look at you like that's the dirtbag, but when you act the way that you're acting right now, then you're feeding the fire and giving them just cause to call you that." Hey, and then I took her under my wing and I made her my clerk, so she started doing good as a clerk, so then just give her added responsibilities to show that hey, you know what? Yeah, you failed, but look at the things you're doing from now. She's a Staff Sergeant. -P3 STAFF OCS, 06/18/2012*

There is nothing novel in our pointing out that leaders can and do reach out to juniors, or that peers support each other—that's what leadership is about. Our goal here is to highlight that this is an ad hoc process, depending on the local command climate and specific Marines. A Marine who doesn't have access to this kind of scaffolding, and someone to walk them through how to do flexibility work (in this case, how to recover from a mistake) is on their own.

This same dynamic exists within institutional schoolhouse settings. For example, we observed at a BOC company at TBS an SPC who had a formal heuristic procedure for how to analyze, understand, and then change in response to significant failure. This SPC understood part of his job at TBS as teaching young lieutenants how to recover, something he traced to his own mistakes and the help he received as a young lieutenant during his first deployment to Iraq. Within the same BOC company however, a different SPC reacted to failure by condemning lieutenants who failed: "Good evening?! It's not a good evening—

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you're a hump drop. Get away from me." Both these Captains felt they were leading—one by showing how to be flexible, and the other by reinforcing steadfastness by shaming. Thus even within schoolhouses, flexibility training is marked by variability and is ad hoc in application.

Another important resource for flexibility work is Marine's private self-talk. Just as negative self-talk can be implicated in the creation of distress, self-talk can be an important way Marines work through how to be flexible and solve problems. Marine self-talk is comparable to examples of senior talking a junior through how to repair, either worked out by the individual Marine, or learned prior to joining the Corps (Marines often pointed to a parent as someone who taught them how to work through failure productively). Just as one Marine might talk another through how to forgive them self and improve, Marines can talk themselves through. As an example, one Captain shared with us how he had through poor judgment placed himself and a corpsman in danger while deployed in Afghanistan. The Captain acknowledged that he had erred, but walked us through a process of understanding what he had done and why, and how we would learn from errors and commit to not repeating them,

[B]ecause no matter who you are, you're going to make mistakes. Hopefully the further along you go in this thing, you make fewer mistakes, I guarantee you everyone's human, everyone still makes mistakes, and if you try to hide them and show the Marines that like oh, I'm perfect, they know you're not. So it's like just own up to it. Say hey, you know I jacked this up. You know, frigging noted, I will never do that again, we're good now. And frigging step off. -P8 STAFF OCS, 07/05/2012

For some Marines the commitment was to learn from mistakes, while others voiced an understanding that they would use failure to motivate themselves and fuel future work. None of them accepts failure as okay, and are utterly serious about their responsibility, but they simultaneously recognize the necessity of figuring out some livable, practical way of continuing to function after failure—they understand how to think flexibly for themselves.

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Gaps in Flexibility Training

Ultimately we found that public, institutional talk and training in the Marine Corps is solely focused on combat and combat preparedness. This leaves Marines to rely on ad hoc, more private and local resources to marshal flexibility/flexibility training to support resilience and thus readiness. Thus while there is both excellent work in training Marines to be steadfast, and much good work on flexibility being done by Marines, we have identified a gap in resilience training: a lack of standardized, public training and doctrine on how Marines should and can be flexible in the support of both their mission, but also their legitimate roles as friends, parents, spouses and children. Our last chapter lays out a rationale for how to fill in these gaps, and specific recommendations about how to put that rationale into action.

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Chapter 4: Conclusion & Recommendations

Second/Third-Order Effects of Steadfastness

Marines experience stress because they strive to be good Marines: Marine culture demands total steadfastness, while being human demands some level of flexibility, and this contradiction can be stressful. Given these sometimes competing demands, Marines learn to be flexible in the service of being steadfast, because that is what good Marines do. Problematically *from the standpoint of stress and resilience*, the demand for steadfastness can become inhuman as Marines are unprepared to be flexible. A basic combat example is this: “I owe my mission and my Marines my best efforts, and I will stay awake until every single detail is attended to.” This can quickly become an inhuman endeavor in the chaotic fog of war with NCOs and officers virtually sleepwalking yet giving orders. A basic non-combat example is this: “I owe my unit my best efforts and I will not go home to visit my family prior to 2000 as we ramp up for deployment.” This can quickly become an inhuman endeavor as well, on the one hand from the standpoint of the Marine who loses the stress reduction of simply playing with his son and, on the other hand, from the standpoint of the family who, at some level, deserves to have the mutual commitment of marriage and fatherhood respected by the Marine²². In both cases stress comes from trying to manage limits and contradictions: in the first case the limits of human endurance, and in the second the contradiction in value orientation between commitment to being a good Marine and commitment to being a good father or mother.

The critical issue here is that Marines can lose sight of balancing steadfastness and flexibility *because being flexible can feel or seem or look like failing to be steadfast*. But, just as critically, this perception can come straight out of the Corps’ institutional demand for

²² We see an opportunity here for deeper discussion as the Corps finds itself caught between an idealistic vision of the Corps as an ancient Spartan *agoge* in which a Marine is defined entirely by his or her duty separate from larger civilian society, and the realistic vision of the Corps as a human community that normally includes familial relationships.

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steadfastness. The default position for Marines is steadfastness, not flexibility, because the Corps has developed a philosophy of combat in which steadfastness is what “gets Marines up the hill.” Marines move faster, harder, and with more aggression than their opponents. To support this philosophy requires in the Corps’ view an unwavering belief in the values that orient Marines toward ever-increasing performance in pursuit of the ideal of “being ready for any mission, anytime, anyplace.” In short, Marines can reject flexibility based on a real or imagined threat to their ability to be combat-ready, or to be perceived as combat-ready by their peers or any of a number of variations.

For example, during our study, one of the researchers observed a 14 mile training hike at TBS. One of the lieutenants pushed himself to the point of heat stroke, finishing the hump, but at the cost of organ shut-down and admittance to the ICU. We note that the lieutenant in question was an air contract, and had previously had his steadfastness called into question when he dropped on a previous hike. During the course of the hike, we noted that while the lieutenant was visibly dehydrated and *in extremis*, his platoon mates universally encouraged him to keep going, hang in there, etc. And after he wound up in the hospital, while the SPC and Company staff were genuinely concerned about his health and welfare, and took this incident as a chance to talk about the necessity for leaders to take good care of themselves and eat/hydrate properly, we note that as a staff they approved morally of his choice to remain steadfast and show his values through his physical actions. In this case, both the Marine and those around him undermined his ability to be flexible, because of the Marine focus on steadfastness. The fact that to act out steadfastness he placed himself at risk for permanent injury or death shows a second-order effect the Corps’ demand for steadfastness.

The Corps as an institution, and units within the Corps, can undermine flexibility in Marines for the same reasons. For example, high op-tempo postings like MCRD PI and OCS have a built-in expectation that drill instructors be supported by families. But single Marines pointed out to us there’s no provisions made for them Marines, some of whom have to choose between being committed to the mission, or sending their children to live with family. Many of the small but crucial tricks for surviving being a third hat DI are predicated on having a family that supports you. One common practice at MCRD PI is for

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wives to bring their husbands a sandwich at lunchtime, and share 20 minutes in the car together. This allows the family a brief window to reconnect, while also giving the physically exhausted Marine a short rest break in the middle of the day. But as one DI pointed out to us, this shuts out single Marines. In her words "I'm single. Who's going to bring me a sandwich?" In these cases, institutional expectations about how families exist to serve readiness can undermine some Marines' ability to be flexible.

And so our recommendations ultimately seek to support and reinforce the ability of Marines to execute good judgment. The dynamic activity of managing steadfastness, resilience, and stress by exercising judgment cuts right to the heart of the Corps and to the heart of being a Marine. The Marine Corps recognizes the need for strategic sergeants and lieutenants whose ability to be effective hinges on the exercise of judgment. Judgment is built in at the level of recruit basic training, because "instantaneous obedience to orders" carries within it an implicit demand for judgment. The Corps expects Marines to understand they have a positive duty to *not* obey illegal or immoral orders. Judgment, while less emphasized at the most junior levels of the Corps, remains endemic to being a Marine. For this reason, we feel that giving junior Marines explicit training in exercising judgment in being flexible does not threaten readiness, but rather enhances it.

Gaining Control Over Second/Third-Order Effects of Steadfastness

The main issue we uncovered in this study is that while most Marines learn to be flexible in the service of steadfastness to core/Corps values, *the process is usually ad hoc*, especially when it comes to non-combat and non-combat-support stressors. Marines are explicitly taught "how to" deal with stressors like a near ambush or a failed helicopter circuit switch. Marines are not explicitly taught how to talk to a recalcitrant child or that they may want to think twice before throwing a casual "suck it up" at a subordinate. We recognize that the Marine Corps has not traditionally been in the business of training Marines in social skills—our training has been in leadership, decision-making, and combat skills, reflecting a focus on combat-readiness. However, we see the vast majority of resilience issues as stemming from the basic issue of conflict between realistic/idealistic expectations, a lack of concepts for dealing with conflicting demands, and how to be take

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care of oneself in an organization demanding and dedicated to the truly remarkable value of absolute selflessness. These are all social skills, and because they directly impact readiness, they need to be part of Marine Corps training.

Ultimately, the Corps' legitimate and critical focus on combat tends to define the totality of being a Marine as combat and combat support. The unintended second-order consequence is to set Marines up for conflicts between trying to be steadfast and balance that out with context appropriate flexibility. The unintended third-order effect is that after being set up for this kind of conflict, many Marines are untrained or unprepared to actively manage the kind of stressors in their lives that emerge from the larger scope of their humanity: the need to decide whether to go home at 1700 to meet the family or stay and counsel a troubled Marine, how to still be a good Marine after an NJP, the need to honor one's commitment to being a good wife, a good father, a worthy member of a house of worship and so on, while being steadfastly committed to being a good Marine. It is our contention that the Corps can do a great deal of good for Marine resilience – and so enhance Marine preparedness for combat – with some modest and centrally-located enhancements to present training provided by schoolhouses such as the Sergeants Course, the Martial Arts Center of Excellence, and Recruit Basic Training. We believe that with forethought and planning this goal can be reached without compromising the Corps' promise to the American people of making Marines ready for any mission anytime anywhere.

We think steering this course is possible exactly because Marines who are committed to being good Marines honor their culture of self-sacrifice and fidelity *by being self-disciplined in the service of being self-sacrificial*. Self-discipline and self-sacrifice yields the cohesion that, as a value, undergirds almost everything Marines do: training and conditioning hikes, for example, give Marines a chance to practice being foot-mobile, but much more importantly, afford Marines a chance to practice putting the group's needs ahead of the individual's. So while Marines honor the valor and heroism individual Marines regularly display, such displays aren't surprising; they are a way of life. For this reason we are confident that training meant to help Marines at all levels make better judgments about when and how to be flexible doesn't threaten Marine commitment to core values. Again,

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good Marines are already exercising such judgment, whether it is a private deciding not to drive after drinking, or a general officer not killing the career of an officer who took casualties after staying too long in an Afghan village trying to establish rapport. Because good Marines already do it, ultimately we think that training Marines to better exercise judgment, while showing to them how such judgment is part of being a good Marine, will yield a more resilient and more combat-ready force.

To do this will require the Corps gaining control over two existing dynamics within Marine Corps culture. *The first dynamic is one in which Marines move from striving for an ideal, to being the ideal.* In that dynamic, nothing a Marine does is ever good enough, as Marines hold themselves to impossible standards. Failing to meet the impossible standard calls into question the Marines' worth and value as a Marine. *The second dynamic is how Marines prepare for new contexts.* Current Marine Corps training prepares Marines to recognize different contexts in combat operations, exercise judgment in how to solve problems in such contexts, and offers detailed "how to" training. This dynamic should be expanded to include recognizing new contexts outside of combat operations, and train Marines to have both the judgment and skills to manage the tensions and problems of non-combat contexts. The following recommendations are grouped into two sections: "Striving for the Ideal," and "Training for non-combat Stress."

Engaging the Dynamic of the Ideal

A critical cultural dynamic in the Corps is the subtle switch from Marines *striving* to achieve the ideal of absolute steadfastness to Marine core/Corps values, to Marines *expecting* themselves and one another to be ideal. For example we expect that Marines should always willingly place themselves in harm's way for the sake of their comrades: "jumping on a grenade" is a shorthand way of expressing this. There is a significant shift however from expecting that Marines live out their values, to expecting that Marines be able to control all events and outcomes, from "willing to jump on a grenade" to "I should have known someone would throw a grenade." This is the problematic switch from "I should bring all my Marines home" to "I should bring all my Marines home *alive*." We see the same shift in garrison when the Company Gunny blasts the last Marine in a PFT *despite it being a*

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First Class PFT performance. Striving for the ideal is good thing, and an example of the kind of positive stress (eustress) Marines generate to improve performance. But if that striving switches to an unreasonable expectation that condemns the Marine—"I didn't bring all my Marines home alive (and so I have failed to live out my values)"—then Marines experience distress, and the harsher the judgment, the worse the distress.

This process starts at bootcamp. We found in our research that new Marines are already steeped in the potential of slipping from the pursuit of the ideal to being the ideal:

I think like our senior drill instructor might have been firm, fair and consistent, and he holds us to a higher standard than -- so if say you want a CFT score of 300. He's going to act like there's a 500, that you can get a 500...If you try your best in everything you do and eight is the best you can get out of 12, well, you shot for 12, but you fell right where you needed to be. It's kind of how I think of it....A lot of times the drill instructors didn't even tell us what the minimum requirement was. They said well you got to get this perfect. Or you got to get above this. And we're like OK. So that's what everybody shot for. Then I don't think anybody in our platoon ever got anything lower than a first class. -MCRD PI Recruit Group Interview, 10/01/2012

Here we can see the institution's demand to always strive for the ideal, not even accepting perfect. There are two very rational concerns behind this demand. One reason is that this demand increases aggregate performance. If the standard for a first class PFT (and the attendant implications for promotion) are 225, a social understanding of never being satisfied leads to scores much higher than 225. Thus the acceptable minimum, but also the aggregate achieved performance, ends up being much higher than the official standard. Just as important though is this demand guards against failing to be steadfast—what these new Marines called "skating" or "sliding by." Marines are aware of how easy it is to let up

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on yourself, and so Marine culture very much relies on members policing each other's performance and their own.

This demand to strive for perfection can be a good thing, and is very much implicated in Marines' battlefield success. Approaching PFTs and CFTs this way not only makes for a more physically fit force, it's also practice for pushing through perceived limits of pain and exhaustion in contexts like combat operations. This demand becomes problematic however when Marines lack the ability to make good judgment about what constitutes having truly strived for the ideal. When a Marine who in the estimate of their comrades acquitted themselves in combat well, struggles with guilt and shame over their performance, they are making an error in judgment, mistaking the unreasonable for the reasonable. It is not reasonable to expect Marines to simply will away the concussive effects of an IED blast. It is not reasonable to expect physically and mentally exhausted leaders to perfectly execute every immediate action, without flaw, the first time they are ambushed. It is not reasonable for Marines to expect that they should anticipate every possible attack, as if the enemy were static, and didn't have a say. It is not reasonable to expect Marines to measure up to truly impossible standards of perfection. We agree with this Marine Major, trying to express his sense of why Marines commit suicide, which is that it is their "last way of measuring up":

Uh, desperation, I guess. Um, they're looking for -- I don't know, for the hours and hours and hours of suicide class -- suicide prevention classes, um, that we've sat in on, um, it's -- it's desperate. They don't know -- they can't come up with any other way, and it's usually because they -- they feel like they've let everyone down so much that the biggest favor, the one last -- it's their symbolic grenade jumping-on, except in this case, the grenade that they're jumping on is their own failure, so they're going to save everyone else from their failures. I think, that's in the cases where, you know -- "My wife and kids would be better off without me. The Marine Corps would be better off without me." It's -- so that's their -- they perceive it as a last noble act, I

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guess. The only way they can really live up to -- I mean, to a certain extent, it's institutionalized. I mean, we don't have a lot of trails and buildings and Medal of Honor recipients named after people who didn't throw themselves in front of a grenade, or several bullets. Um, so it's their last way of measuring up. -P12 STAFF OCS, 07/26/2012

This same dynamic can be a problem in more prosaic, day-to-day readiness issues as well. While the Corps certainly wants and can expect Marines to be self-sacrificial on the battlefield, the same expectation in garrison leads to what appears to be (from the Corps's standpoint as a warfighting organization) unacceptable threats to readiness in the form of, for example, stress fractures, chronic injuries, and repetitive stress injuries, as Marines switch from *practicing for the ideal* to *trying to be the ideal*. It also creates stressors in terms of a Marine's attempt to balance commitment to the Corps with other human endeavors like being a good father or a supportive member of the local community that the Corps does not consistently or effectively train Marines to handle. The key issue here is the recognition of context: battlefields and garrison are, in fact, two different realities but the Corps's emphasis on "training like you fight and fighting like you train" invites Marines to mitigate the differences and act in garrison as if they were on a battlefield. While extremely effective in honing warfighting skills, this approach carries with it the consequences noted above. We are not implying – because we do not think – the Corps has to give up this endeavor. What it must do is to spend time, money, effort, and leadership on enhancing not Marines' flexibility (per, for example, the Small Unit Decision-Making effort) but enhancing their judgment. The end-state might be imagined as follows: Marines who could, on behalf of themselves and on behalf of their fellow Marines, something akin to reducing the miles run in a single week by 10% and in doing so reduce the number of stress injuries by 22%, without then questioning commitment. The saved time could be allocated to a family-inclusive program at the end of the week.

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Recommendations

If there is agreement that a better balance between steadfastness and flexibility is to be pursued through better Marine judgment, training Marines *how* to make good judgments, why, and when, must also be part of the effort. We think that such efforts must not be (and do not have to be) a separate program. Rather, these efforts can and should be part of the core training Marines receive starting at introductory schools such as Recruit Basic Training and The Basic School, and followed through with content integrated in School of Infantry, various MOS schools, Corporals Course, Sergeants Course, and so on. The effort here is to acknowledge and address what the Corps has for many years sought to limit – the larger lives of Marines. It appears to us that, traditionally, the Corps has defined Marines almost solely in terms of their duty and related all other parts of their lives to that core feature. And, perhaps, rightly so given how the Corps envisions the Marine warrior as a selfless being totally committed to the mission. But this approach is itself an idealism that does not bear the weight of present realities, especially as the Corps is being asked to account for sexual assaults, suicides, domestic abuse, broken marriages and families, and so on by the members of the larger American cultural context in which (and for which) the Corps exists. Duty is not enough when it dictates do not alert Marines that what they are in is a relationship that requires calmness, not aggression, or self-discipline rather than self-indulgence. Duty is irrelevant if a Marine does not know how to be calm in different contexts with different people, or why they understand women in terms of objects to be used. If such training is not part of central, core efforts, the Corps will be sending an implicit message that ultimately it wants Marines to inform all their judgments using warfighting/duty-oriented values while leaving it up to them to somehow figure out what to do with and in situations and relationships for which those kinds of values are either irrelevant or even antithetical. Notice this exchange with new Marines at the end of Recruit Basic Training where, when asked how they would approach interactions with their families, they immediately gave an answer in accordance with the Corps values of steadfastness:

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I think that we have a lot more patience and we can approach them with more respect and just same thing. Relaxed, confident, aggressive. Like whatever it needs to be in the situation. –MCRD PI Recruit Group Interview, 10/01/2012

The recruits went on to point to these Corps values as those which they intend to apply to all aspects of their lives, including such mundane tasks as brushing their teeth.

*Honor, courage, commitment, these -- those are values that are instilled in you. You know those are values that you can apply to -- you know I feel like being committed to this, or I feel like you know being courageous with that. They're qualities that are applied in every situation every day of your life. You know getting up and brushing your teeth. **You know you're committing to getting every piece of bacteria and plaque off.** It's an everyday thing. You know, so applying it to, you know, family, strangers, civilians, Marines. –MCRD PI Recruit Group Interview, 10/01/2012*

We believe that while applying these steadfast values may be useful in some circumstances, there are others where it is not appropriate, such as when talking to a spouse or while brushing teeth.

Our recommendations center on refining Marine Corps culture.

- 1. Address Tensions Between Steadfastness & Flexibility.** As part of the zero-based curriculum assessment at Marine Corps University, marshal institutional resources toward developing:
 - a. Models and Content for Judgment Training.** Gather examples of best practices for using judgment across a range of non-combat and non-combat support situations both within and outside of the Corps from successful Marines. These can be used to develop guided discussions as content at schoolhouses and development courses.

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- b. **Turn Models and Content into TDG's for Schoolhouses.** TDG's are known and effective training tools for Marines, because they allow Marines to develop and practice decision-making. Use them as a means to development judgment as it relates to non-combat decision-making, e.g. in domestic scenarios, or productively handling failure. An example would be to ensure more than a "don't do it" message from Senior Drill Instructors to new Marines in a talk about what might happen on boot leave. A TDG could be developed that would give SDI's practice in not only alerting new Marines to potential pitfalls on boot leave, but instructing them on how to navigate them, and what to do, or what to think, if they slip-up.
2. **Train the Trainers.** In addition to adding curricular content that helps train Marines for non-combat/non-MOS stressors, the Marine Corps should make explicit to instructors at schoolhouses that they have an obligation to prepare Marines for the full range of challenges and stresses they will face. Instructors at places like MCRD PI and TBS already uniformly understand their obligation in terms of preparing Marines for combat. However, instructors like SDIs at MCRD PI or Staff Platoon Commanders (SPCs) at TBS, do this for broader life stressors on an individual, ad hoc basis. The aim for such training should not be prescriptive, for example that SPCs should tell new lieutenants to give their junior Marines x days off once a quarter to connect with families, or create a decision matrix for juggling multiple obligations. Instead, instructor training should raise the issue of preparing for non-combat/non-MOS stressors and make clear that instructors have a duty to share their judgment and experience—this is an enabling step to supplementary training added to the POI. The goal should be trainers who understand that they are helping young Marines and the Marine Corps by recognizing that stress and resilience is not solely a combat issue.

 - a. This is comparable to the shift at TBS in 2011 from a lecture/content delivery mode to a Socratic/Discovery learning mode of teaching. The point of leverage in this case was not only a curricular content change or addition, but rather a new way for instructors to understand their obligations in

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teaching. One captain at TBS who had experience this teaching philosophy change in between two SPC billets for two different BOC companies, told us he understand his purpose now was to structure discussions, not lead them; let students discover solutions, not tell them the answer; that in essence if the student lieutenants were doing most of the talking, he was on the right track as a teacher. This is a powerful shift in understanding the role of instructors, and in pedagogy theory is "heuristic teaching," that is, teaching problem-solving techniques that can exported to novel situations, as opposed to teaching content that may or may not match a situation.

- b. Because experienced, resilient Marines walk a knife-edge between striving for the ideal, but not holding themselves to unattainable ideal, the focus of this sort of training is on inculcating judgment. So for example, experienced, effective SDIs at MCRD PI exercise judgment in managing the physical output of junior DIs—sending them to laundry detail, "making" them go on a PX run, etc. So as an SDI, *that one should consider* when to send juniors on laundry duty is a teachable, definable goal for training at DI School—when and how that is instantiated though is a judgment call for Marines. Thus in any sort of training of trainers, space should be reserved for Marines exercise of judgment. Any attempt to institutionalize an effective local/private practice, rather than the principle, will "kill the magic," as one training officer put it.
- c. Alerting instructors to their broader responsibility is particularly important as a way to guard against the movement from trainer to evaluator (trying to screen for the ideal). We recognize that some places in the Marine are about screening out the wrong kind of person; OCS and IOC function primarily as gatekeepers for a certain kind of commitment and values hierarchy. This is legitimate and a vital function for the Corps. But places like MCRD PI, TBS, and DI School are fundamentally about training Marines who have already been judged as full members. The shift some instructors make to screeners, to imposing their own extracurricular standards above the Corps' is a misunderstanding of role: protecting the Marine Corps from those who don't

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measure up ("it was tougher in my day"), instead of training young Marines so they can succeed. Again, this is an issue of judgment. We recognize that leaders in a unit or instructors at a schoolhouse may wish to quietly see how far new people will go and exert themselves. There is a legitimate difference between having to reign in Marines who are overextending themselves, and those who are happy to take themselves out of the fight. Evaluating therefore can be a useful impulse, but at training locations, it must eventually give way to a training mode. Talking through this issue as part of instructor training can help alert instructors to this tendency, and thus better position themselves to self and peer monitor.

3. **Institutionalize *Support for Resilience Work*.** Instead of institutionalizing resiliency training, the Marine Corps should *institutionalize support for resiliency work*. It is clear that some kinds of talk are not possible in the public sphere, and so some kinds of resilience work training likely cannot be institutionalized. For example, it would not be possible for the Marine Corps to explicitly develop a TDG centered on "how to" remain steadfast after a decision to open fire on a vehicle speeding toward a checkpoint resulted in civilian casualties. But the Corps can point toward books, articles, and talks as "recommended reading" for Marines much like the Commandant's Reading List, and incorporate guided discussions on such sources into training. If done carefully and promoted appropriately, Marines with good judgment will pick up on and deliver the knowledge, concepts, and ways of acting that emerge as lessons from this kind of work.
4. **Give Marines a Vocabulary and Conceptual Toolbox for Dealing With Stress.** Content here would emerge from 1a and 1b above. An example of vocabulary change would be from "you're a dirty hump-drop, get out of my face," to "you failed in your mission, let's review what happened, figure out why, and put a plan in place to make sure it doesn't happen again." An example of a conceptual tool would be, "remember when I talked to you about how to engage failing on a hump productively? Let's use that same approach for figuring out what's going on at home..." The concept here is the idea of applying good judgment – in the form of a

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productive model for dealing with failure – from core Marine training to a non-combat oriented situation or issue. These concepts and more precise vocabulary should be reflected in training as per 1a and 1b, as well as in doctrinal publications as per 4.

5. **Put it in Writing.** Amend key doctrinal publications to make clear the Corps' stance on this tension and its commitment to enhancing Marines' capabilities (judgment) in that regard. We specifically recommend revising MCWP 6-11 Leading Marines and MCRP 6-11c Combat Stress. Currently these publications either reserve "family" for the relationships between Marines, or position families as a source of stress and a burden on Marines' readiness. Additionally, we recommend a review of MCDP 1 Warfighting, the central doctrinal publication that provides Marines with the Corps' perspective on the world. Currently, "family" is used in MCDP 1 only to refer to "families of equipment."
6. **Reinvigorate the Priority of Face-to-Face Marine Interactions.** Face-to-face interaction within cohesive units is critical to Marines knowing their Marines and conducting the local, contextual delivery of good judgment in the form of mentoring and peer-to-peer guidance. To the extent that the Corps' administrative concerns like manpower slating ahead of cohesion, is the extent to which this priority is delegitimated. An example of this is PCS'ing Marines post-deployment, which suggest that relationships and cohesion developed by Marines is secondary to the tasks that require "doing" by the Corps.
7. **Use Previous Cultural Change as a Template.** The scope of our recommendations may seem daunting, but the Marine Corps has had previous success in changing its culture, for example from an attrition mindset to a maneuver mindset. Among the key mechanisms for that were making changes at the doctrinal, schoolhouse, unit and individual level. The Corps can draw on that experience to refine its culture to account for flexibility through explicit training in judgment.
8. **Expand Research to Include Families.** By excluding families from this research, the Marine Corps risks having an incomplete self-assessment that misses the place where Marines report the most distress and their greatest challenges. While

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difficulties with stress – and even learning or generating good/bad habits for managing stress – occur in theater, most serious issues appear to emerge as Marines try to engage their sense of their worth among their family, civilian and garrison contexts.

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Appendix A: Scientifically Plausible Theory of Resilience

What's Under the Hood? The Theory Behind the Study

This study is based on a new realist theory of social science (Aronson, Harré, and Way 1995, Bhaskar 1978, Harré 1995, Harré and Madden 1975, Varela 1999). New realism proposes a framework for understanding human action (not “behavior”) in which “the person” (not “the brain” or “the Hypothalamic-Pituitary-Adrenal Axis” or “psychological traits”) is the key concept for research. As such, what Marines actually say and do constitute the legitimate kind of data for this research.

This is a radical departure from traditional social scientific research. Traditional social scientific research shows a strong inclination toward imposing arbitrary numeric scales onto what Marines do in order to detect and “measure” statistical correlations; the premise here is that what is real is the mechanical operations of bio-physiology. The qualities of socio-cultural relationships – what we mean – are illegitimately recast in empirical terms. In the present effort, this traditional inclination and premise is replaced with articulating what Marines mean by discussing how and why they dynamically live their values in real life. We are after not the accuracy of measurement but rather the precision of meaning.

Importantly, referencing “the brain,” “the HPA Axis,” or “psychological traits” in talk about stress, resilience, or steadfastness represents a misguided attempts to locate the source of what we see and hear Marines doing every day with entities and processes that are functionally discontinuous with a Marine’s use of language (both in terms of vocalizing and moving). These attempts are misguided because the only entity capable of speaking, of understanding a context, and of meaning anything in a conversation or in an action, is a person in a socio-cultural world, not a brain, an HPA Axis or a trait. Such references are scientifically implausible and so illegitimate. It is like claiming that a rock or a stream can talk.

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One strong implication of this new realist perspective is that stress, resilience, and steadfastness are primarily socio-cultural actions embodied by persons that can have bio-physical consequences. This reverses the usual order of thinking for many resilience researchers who tend to claim that stress, resilience, and steadfastness are the result of some internal or external mechanical causal process. This is why the terms “shock” and “trauma” are so powerful – they tend to reference the mechanical causal processes that these researchers think result in “broken” Marines. But when the object of study is changed from “mechanical causal processes” to “persons in dynamically-embodied relationships with one another” there is literally nothing to measure in terms of entities or forces because such entities and forces do not have the capability to produce what we see and hear people actually doing every day. As a result, it is impossible to develop a picture of the “average jihadist” without ignoring or dismissing substantial portions of reality (Harré 2012, personal communication). This is why accuracy of measurement is at best sensitizing and never definitive in a project like this.

This is not to say that bio-physiology is irrelevant. For example, humans born without brains (anencephaly) cannot use language. Consequently they cannot interact socially and so cannot be a person in any recognizable way. The proper way of understanding the relationship of biology to culture is that our biology *affords* us the capability of using language dynamically with each other, but it does not *cause* us to use language. Nor does it cause us to use language in a certain way or to mean anything in particular. Our linguistically-based dynamic activity, like living resiliently or steadfastly, is *functionally discontinuous* from the operations of our biology, except in extreme cases (like anencephaly). The point here is that the relationship of our socio-cultural values like “resilience” and “steadfastness” to our biology is not causal and therefore not of primary importance either to us as researchers or to Marines as practitioners of such values. (Harré 1984; Varela 2003).

The latter, traditional but mistaken idea – the idea on which much traditional social science research is based – invites us to accept the fantastical notion that inside or outside our bodies exist causes for our behavior, causes that essentially control us (Manicas 1987). The idea is fantastical because such causes – the brain, language, genes, personality,

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biological needs, the unconscious, culture, society, and so on – are scientifically implausible either as entities or as entities that possess the capability of exercising control over people. Using them as explanation of human social activity yields deep confusion, not deep clarification.

A good example of this kind of unscientific theoretical commitment and ensuing confusion can be found in Dave Grossman's *On Killing* (1995). While Grossman's descriptive efforts are laudable and make some sense, explaining those descriptions by reference to Freudian myths, which are proposed to exist as unconscious mechanisms that ultimately control the person, is incoherent (Varela 1995). It is not too much to say that his explanation contradicts his descriptions and invites confusion. Are we to believe that a death myth is the proper or deep explanation of a Marine smothering a live grenade as did Corporal Jason Dunham? Or is the everyday Marine answer – "in order to save his brother Marines" – inaccurate because the real reason is that Dunham had a death wish? Implausible scientific theories invite us to dismiss the everyday talk and actions of Marines as either irrelevant or the tip of a bio-psychological iceberg that is beyond the control of the individual Marine.

In American culture the idea of biology controlling the person is typical, with news reports announcing the supposed discovery of genes that control trust, love, or other enactments of socio-cultural values. Simply, genes, like brains, are not capable of exercising such control. This kind of incoherent thinking initiates and supports a consistent mistake in research offered to the Marine Corps, and associated efforts to get a handle on resilience. That mistake is to assume that the only or best scientific place to start with resilience has to do with our bio-physiology, whether in the form of genes, the brain, or the endocrine system.

Tucked away behind this assumption is the idea that somehow our bio-physiology is the overall source of the "issue." But, in a new realist understanding of the relationship between biology and culture, the interpersonal, cultural conduct of our actions is to be attributed to persons alone as they use their biologically afforded (not biologically determined) dynamic and embodied linguistic capabilities. In short, how, when, and why we decide to talk and act is where resilience and steadfastness are to be found, not in the

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activity of our HPA Axis (though our activities may activate or deactivate it in important ways). The HPA axis may be relevant for some limited questions about the bio-physiology of resilience or steadfastness, but it is of secondary importance for scientifically-based, plausible rendition of what counts resilience or steadfastness for Marines. We add that this may not be the case in situations of traumatic brain injury. When biology is “broken” the normal operation of bio-physiology that permits the enactment of being a person may be (but is not necessarily) compromised. Nevertheless, in all but the most severe cases, the evidence suggests that biology being compromised – as in brain damage – makes it more difficult, but not impossible, to be a person who is in control of him or herself.

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Appendix B: DocuScope Linguistic Software & Statistical Information

DocuScope and Method

Overview

This study is a computer-aided analysis of how institutional talk at Officer Candidate School (OCS) represents²³ *steadfastness* (commitment to duty) as the quintessence of Marine identity. We used linguistic software to analyze OCS documents, and found consistent, distinctive linguistic patterns when compared to general English. A subsequent qualitative analysis of those patterns showed that at the micro-level of individual words and clauses, institutional texts at OCS narrate *transformation*.

Our quantitative description used the computer program DocuScope²⁴, a highly robust and accurate computational linguistics program. DocuScope uses a representational theory of language—a way of looking at language as an attempt by speakers and writers to represent the world, and how these representational choices at the lexical/clause level aggregate up into a particular reader experience. DocuScope works by tagging and counting strings of words by category. So for example the refutation language category includes strings in the form of *subject + copula verb + negative judgment* (e.g. “that’s nonsense”); the direct address category includes strings in the form of *pronoun + modal + verb* (e.g. “you should consider”) and so on²⁵. The OCS institutional corpus we analyzed is marked by statistically high means of future oriented language: for example *will, will be*, and *demonstrative pronoun + will/will be* (e.g. “If any candidate is seen intentionally emptying their canteens of water *this will be* treated as an integrity violation resulting in a failed course”) are all strings that DocuScope counts in the future category.

²³ In rhetorical theory a text or speech “re-presents” that which is not present. So a news article on a robbery is a re-presentation of the absent (the participants, the physical location, the action that occurred).

²⁴ Please see <http://www.cmu.edu/hss/english/research/docuscope.html> for more information.

²⁵ See Hope & Witmore, 2010

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This method is highly accurate and robust when the language samples analyzed are large enough, on the order of thousands of words—our sample for this analysis was 208,423 words. While any individual categorization may be anomalous, at the aggregate level these category frequency counts are highly accurate. The linguistic structures DocuScope categorizes has been robust in forensic analysis, for example achieving accuracy rates between 75%-90% for distinguishing and determining authorship in speeches composed by President Ronald Reagan, and Reagan aide Peter Hannaford²⁶, positively identifying authorship in the 312 unattributed Reagan radio broadcasts. DocuScope has also been highly accurate and parsimonious in predicting consumer sentiment from unstructured online text. When combined with traditional n-gram analysis, this method achieved 93% accuracy, but drastically lowered the amount of language features needed for analysis from 1,752 to 76²⁷.

An important distinction though is that for all its accuracy, DocuScope doesn't make meaning. DocuScope can identify linguistic patterns, and then quantify the presence or absence of those patterns, but not say what those patterns mean. For example, when the Shakespeare folio was analyzed with DocuScope, a Principle Components Analysis (PCA) of the category frequency counts matched classifications human readers give: it quantified exactly what went into histories, comedies, and tragedies²⁸. But DocuScope also showed statistical outliers—for example, Othello, a tragedy, also shares the linguistic structures characteristic of comedies. It remained for human readers—Shakespearean scholars—to make meaning from this, using qualitative analysis to show how Shakespeare used the structure of comedies to heighten distress when things go wrong in the tragedy. In this case, DocuScope gave us a robust description of institutional language at OCS that we can generalize from, but we also needed to use qualitative discourse analysis methods to make claims about what those language patterns mean (e.g. epistemic modal usage as a representation of certainty).

²⁶See Airoidi 2003, and Airoidi, et al. 2006. Specifically Airoidi combined the language features coded by DocuScope, word count frequency, and a probabilistic mining of n-gram word collocations, to cross-validate accuracy in forensic identification.

²⁷ See Bai, 2011.

²⁸ See Hope and Witemore, 2010.

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Statistical Testing

For our analysis, we *chunked* and *normalized* the OCS documents into like-sized pieces, so that there was both a sufficient number of pieces to produce statistically reliable results, and so that the density of representational effects weren't obscured by very large text chunks. These chunks were then compared to the FROWN corpus of contemporary English (a contemporary corpus of US English) for frequency of strings of words corresponding to different rhetorical classes (e.g. talk about the future, description of real world objects, reporting changes, emotions, narrative). We conducted one-way ANOVA testing for variance on the mean frequency of each class of language use for both corpora, looking for statistically significant differences. The two corpora have much in common, in that they are English language texts—we wanted to see how they differed in the significant ways they represent the world.

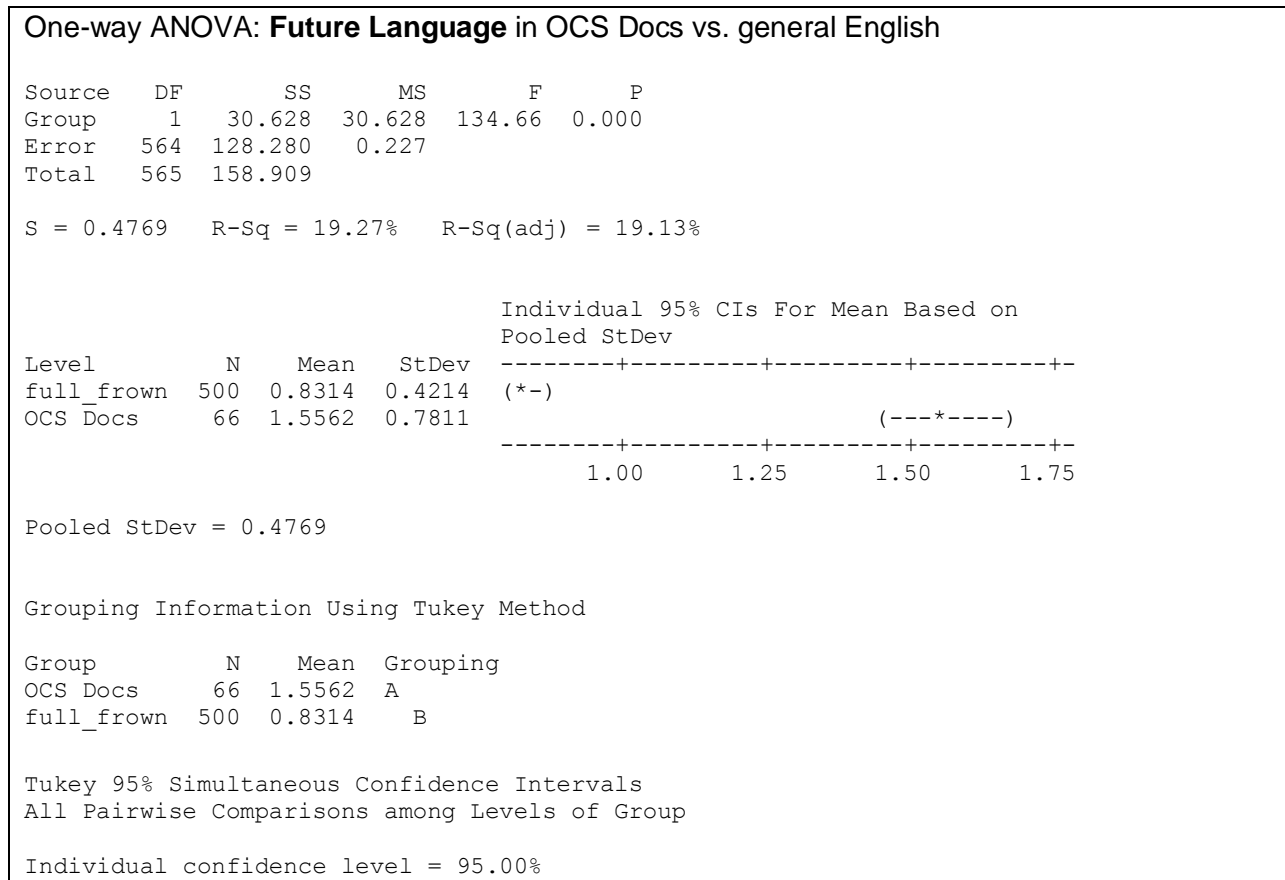
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Statistical Data of Select Features:

The below information shows the results of One-Way ANOVA tests of variance for two dependent variables in linguistic corpora: future and process change talk. Two corpora were tested against each other: a representative corpus of general English ("full_frown") as a baseline for testing, and a corpus of representative documents from OCS. Both tests used a post-hoc Tukey's Family test to verify that means were significantly different.

Additionally included is a subset of future language, "predicted future"—language that indexes epistemic certainty about future events.



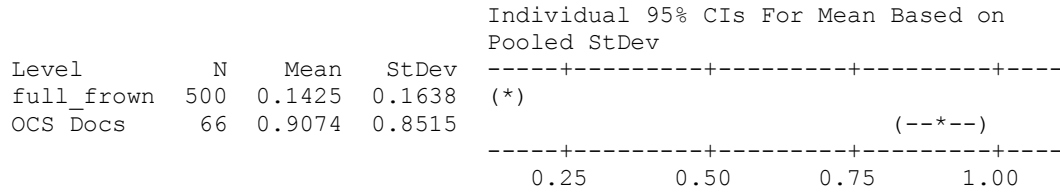
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One-way ANOVA: Predicted Future in OCS Docs vs. general English (*certainty* subset of Future Language, above)

Source	DF	SS	MS	F	P
Group	1	34.112	34.112	317.90	0.000
Error	564	60.520	0.107		
Total	565	94.632			

S = 0.3276 R-Sq = 36.05% R-Sq(adj) = 35.93%



Pooled StDev = 0.3276

Grouping Information Using Tukey Method

Group	N	Mean	Grouping
OCS Docs	66	0.9074	A
full_frown	500	0.1425	B

Means that do not share a letter are significantly different.

Tukey 95% Simultaneous Confidence Intervals
All Pairwise Comparisons among Levels of Group

Individual confidence level = 95.00%

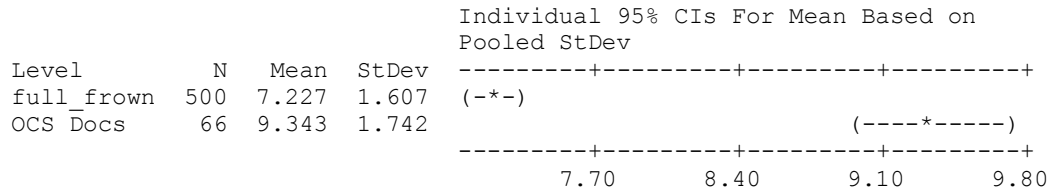
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One-way ANOVA: Reporting Process Language in OCS Docs vs. General English

Source	DF	SS	MS	F	P
Group	1	260.98	260.98	99.10	0.000
Error	564	1485.26	2.63		
Total	565	1746.25			

S = 1.623 R-Sq = 14.95% R-Sq(adj) = 14.79%



Pooled StDev = 1.623

Grouping Information Using Tukey Method

Group	N	Mean	Grouping
OCS Docs	66	9.343	A
full_frown	500	7.227	B

Means that do not share a letter are significantly different.

Tukey 95% Simultaneous Confidence Intervals
All Pairwise Comparisons among Levels of Group

Individual confidence level = 95.00%

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Appendix C: Word Etymologies

All information sourced and paraphrased from Douglas Harper and <http://www.etymonline.com>.

Bond: 13th century. “Anything that binds”, derived as a phonetic variant of “band”, influenced by the Old English *bonda*, meaning “householder,” or “dweller”. *Band* is used to mean “that by which someone or something is bound”, and is used from the 12th century onward, from the Old Norse *band* (“thin strip that ties or constrains”), from Proto-Germanic **bindan*, from the Proto-Indo-European **bendh-*, “to bind”. (Gothic *bandi*, “that which binds;” Sanskrit *bandhah*, “a tying, bandage”, the source of *bandana*). Most figurative definitions of “band” have been passed to the word *bond*. *Band* is also used after the 15th century to mean “an organized group”, from the Middle French *bande*, likely through the use of a band of cloth worn to identify a group of soldiers or others (Gothic *bandwa*, meaning “a sign”).

Character: 14th century. From Old French *caractere* (13th century), derived from Latin *character*, from Greek *kharakter* (“engraved mark” and “symbol or imprint on the soul”), from *kharassein* (“to engrave”), from *kharax* (“pointed stake”), from Proto-Indo-European root **gher-*, meaning “to scrape, scratch.” Meaning extended through metaphor to mean “a defining quality.”

Courage: 14th century from 12th century Old French *corage*, meaning “heart, innermost feelings, temper,” from Latin **coraticum*, from Latin *cor*, meaning “heart”, which doubles as a common metaphor for inner strength. Used in Middle English to mean “what is in one’s mind or thoughts,” and therefore “bravery”, but also to mean “wrath, pride, confidence, lustiness” or any similar inclination. Replaced the Old English *Ellen*, which also meant “zeal or strength”.

Demonstrate: 16th century. From Latin *demonstratus*, “to point out by argument or deduction”.

Discipline: 13th century meaning “penitential chastisement or punishment” from the 11th century Old French *descepline*, meaning “discipline, physical punishment, teaching,

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suffering, martyrdom”, and directly from the Latin *disciplina*, meaning “instruction given, teaching, learning, knowledge.” Also meaning, “object of instruction, knowledge, science, military discipline” from *discipulus*. The definition as “treatment which corrects or punishes” is from the notion of “order necessary for instruction”. The meaning “branch of instruction or education” first comes into use in the 14th century. The meaning as “military training” from the 15th century, and that of “orderly conduct as a result of training” from around 1500.

Ethical: 17th century. From ethic + al, meaning “pertaining to morality.” Ethic (14th century), from *ethic*, “study of morals”, from Old French *etique* (13th century), from Latin *ethica*, from Greek *ethike philosophia*, “moral philosophy, the feminine of *ethikos*, “ethical”, from *ethos*, “moral character” and related to *ethos*, “custom”. “Ethic” came to mean “the moral principles of a person” in the 17th century.

Ethos: Greek word, meaning “moral character, nature, disposition, habit, custom.” Brought back into usage in 1851.

Flexibility: 17th century, referring to physical things. From French *flexibilité*, or directly from the Latin *flexibilitatem*, from *flexibilis*, meaning “that may be bent, pliant, flexible, yielding” and figuratively “tractable, inconstant”, from *flexus*, from *flectere*, meaning “to bend.” Of immaterial things from the late 18th century.

Honor: 13th century, meaning “glory, renown, earned fame”, from the Anglo-French *honour* and Old French *honor*, from the Latin *honorem*, meaning “honor, dignity, office, reputation,” of otherwise unknown origin.

Imprint: 14th century. From Old French *empreinte*, *eimpreindre*, “to impress, imprint”, which is derived from the Latin *imprimere* (*in-* “in”, *-premere* “to press”), “to press into or upon, stamp”. Used as a noun after the mid-15th century.

Inoculation: 15th century. Originally used in horticulture, the meaning “to implant germs of a disease to produce immunity is recorded in 1714, referring to smallpox. After 1799, generally used in the sense of “to vaccinate inoculate”. From the Latin *inoculationem*, “an engrafting, budding”, as a noun of action from the stem *inoculare*, “graft in, implant”, from *in-* “in” + *oculus* “bud,” originally “eye”.

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Instill: 15th century. From the Latin *instillare*, which means to “put in by drops, to drop, trickle”. *In-* (“in”) –*stilla* (“a drop”). Related to words like “distill”, which refers to the process of producing alcohol through a still.

Judgment: 13th century. Meaning “action of trying at law, trial” and “capacity for making decisions. From the Old French *jugement*, meaning “legal judgment; diagnosis” (11th century), from *jugier*. Used from the late 13th century to mean “a penalty imposed by a court;” from the 14th century as “any authoritative decision or verdict.” From the 14th century to refer to the Last Judgment and to mean “opinion”. First used to mean “discernment” in the 16th century.

Leadership: 19th century, from leader + -ship, meaning “position of a leader”, and extended to mean “characteristics necessary to be a leader” by the end of that century. From Old English *lædere*, meaning “one who leads”, which is an agent noun from *lædan*, meaning “cause to go with, lead, guide, conduct, carry”, causative of *liðan*, meaning “to travel”, from West Germanic **laidjan*, from the Proto-Indo-European **leit-*, meaning “to go forth”. From the 14th century, used to mean “action of leading.”

Mental: 15th century. “Pertaining to the mind.” From Middle French *mental*, from Latin *mentalis*, meaning “of the mind”, derived from *mens* (“mind”), from the Proto-Indo-European root **men-*, “to think”. (See previous entry, “Mind” for more comparable words in Indo-European languages.) Definition as “crazy, deranged” comes into use after 1927.

Mind: 12th century. From the Old English *gemynd*, meaning “memory, remembrance, state of being remembered; thought, purpose; conscious mind, intellect, intention,” from Proto-Germanic, **ga-mundiz*, from Proto-Indo-European root **men-*, meaning “think, remember, have one’s mind aroused,” with derivative words referring to qualities of mind or states of thought (Sanskrit *matih*, “thought,” *munih*, “sage, seer;” Greek *memona*, “I yearn”, *mania*, “madness,” *mantis*, “one who divines, prophet, seer;” Latin: *mens*, “mind, understanding, reason,” *memeni*, “I remember,” *mentio*, “remembrance;” Lithuanian *mintis*, “thought, idea”, Old Church Slavic *mineti*, “to believe, think;” Russian *pamjat*, “memory”). The meaning as “mental faculty” is from the 14th century. The meaning as “memory” is now almost obsolete, except in expressions such as “bear in mind”, etc.

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Moral: Adjective, 14th century. From Old French *moral* (14th century) and Latin *moralis*, “proper behavior of a person in society”, or, literally, “pertaining to manners.” First use of *moralis* by Cicero to translate the Greek *ethikos*, from the Latin *mos*, or, “one’s disposition; mores, customs, manners, morals”. May share a Proto-Indo-European root with the English *mood*. Use as an adjective to denote “good” or “conforming to social rules” begins in the 14th century to describe stories (with a good “moral”), and in the 17th century to describe people.

Physical: 15th century. “Of or pertaining to material nature”, from Latin *physicalis*, “of nature, natural” and *physica*, “study of nature”. The meaning “of the body, corporeal” is used from 1780 onward, and the meaning “characterized by bodily attributes or activity” is used from 1970 onward.

Proud: From Old English *prud* and *prut*, likely derived from Old French *prud*, an oblique case of the 11th century adjective *prouz*, meaning “brave” or “valiant”, from the Latin *prodesse*, meaning “be useful” (*pro-* meaning “before” + *esse*, “to be”). The sense of, “to have a high opinion of oneself.” Which is not found in Old French, may reflect the Anglo-Saxon opinion of Norman knights who called themselves *proud*. Old Norse *pruðr* is likely from the same French source, but only carried the sense of “brave, gallant, magnificent, stately” (compare to Icelandic *pruður*, Middle Swedish *prudh*, Middle Danish *prud*), much like a group of “pride” words in Romantic languages, such as French *orgueil*, Italian *orgoglio*, Spanish *orgullo*, are borrowed from Germanic (such as the Old High German *urgol*, meaning “distinguished”), where they had positive connotations. Many Indo-European languages use the same word to mean positive and negative senses of “proud”, but for most, the negative precedes the positive. The verb meaning “to congratulate oneself” is used from the 13th century onward.

Reaction: 17th century. From *re-* “again, anew” + *action*. Modeled on the French *reaction* and older Italian *reattione*, from Latin *reactionem*, from *react-*, stem of *reagere*, “react,” from *re-* “back” + *agree* “to do, act”. Originally used as a scientific term, the physiological sense is used from 1805, and the psychological sense first recorded in 1887. A general meaning of “action or feeling in response” to some stimulus is recorded from 1914.

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Resilience: 17th century. From the Latin *resiliens*, from *resilire*, meaning “to rebound, recoil”. From *re-* (“back”) + *salire* (“to jump, leap”).

Response: 14th century. From Latin *responsum*, “answer”, from *respondere*, “to respond, answer to, promise in return,” from *re-* “back” + *spondere* “to pledge.” Modern spelling and pronunciation is from the 17th century.

Rigidity: 16th century. From Latin *rigidus*, meaning “hard, stiff, rough, severe,” from *rigere*, meaning “be stiff”, from the Proto-Indo-European **reig-*, meaning “stretch (taut), bind tightly, make fast”.

Skill: 12th century. Meaning “power of discernment”, from the Old Norse *skil*, meaning “distinction, discernment,” related to *skilja*, a verb meaning “to distinguish or separate”. From Proto-Germanic **skaljo-*, meaning “divide, separate”. First used to mean “ability” in the 14th century.

Spirit: 13th century. “Animating or vital principle in man and animals”, from the Old French *esprit*, from Latin *spiritus*, “soul, courage, vigor, breath.” Related to *spirare*, “to breathe”, from the Proto-Indo-European **(s)peis-* “to blow.” First usage in English primarily from passages in Vulgate, where the Latin word is used to translate Greek *pneuma* and Hebrew *ruah*. The distinction between “soul” and “spirit” became current in Christian terminology (Greek *psyche* vs. *pneuma*, Latin *anima* vs. *spiritus*), but not before. The Latin *spiritus* is usually meant as “breath” in classical Latin, and replaces *animus* in the sense of “spirit” in the imperial period, and appears in Christian writings as the usual equivalent of the Greek *pneuma*. The meaning as “a supernatural being” (or “ghost”) comes into use in the 14th century. The meaning of an “essential principle of something” is used from 1690 onward, but commonly after 1800. “Spirited” comes into use as an adjective in the 16th century to mean someone who is lively and energetic. The use of the word “guts” to mean one’s “spirit” or “courage” comes into parlance in 1893, though the concept of the bowels as the center of one’s spirit can be traced at least as early as the 14th century.

Steadfastness: From Old English *stedefæst*, meaning “secure in position.” From *stede* + *fæst*.

Stimulus: 17th century. Originally as a medical term meaning “something that goads a lazy organ.” From the Latin *stimulus*, “goad”. General meaning from 1791. Psychological meaning is first recorded in 1894.

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Stress: 14th century. Meaning “hardship, adversity, force, pressure,” derived in part as a shortening of the Middle French *destresse*, and in part from the Old French *estrece*, meaning “narrowness, oppression,” from the Latin **strictia*, from *strictus*, meaning “compressed”, from *stringere*, “draw tight”. Used in the psychological sense from 1942.

Transformation: 14th century. From Old French *transformation*, noun of action from Latin stem *transformare*, meaning “change the shape or form of”, from *trans-* (“across”) + *formare* (“to form”).

Understand: From the Old English *understandan*, “comprehend, grasp the idea of.” Likely literally means “stand in the midst of”. If so, *under* does not have its typical meaning as “beneath”, but from the Old English *under*, from the Proto-Indo-European language **nter-*, which means “between, among”. Compare to the Sanskrit *antar*, “among, between”, Latin *inter*, “between, among”, and Greek *entera*, “intestines”. Other Old English compound words that resemble *understand* and this meaning of *under* are *underniman*, “to receive,” *undersecan*, “to investigate,” and *underginnan*, “to begin.”

“Perhaps the ultimate sense is “be close to,” cf. Gk. *epistamai* “I know how, I know,” lit. “I stand upon.” Similar formations are found in O.Fris. (*understonda*), M.Dan. (*understande*), while other Germanic languages use compounds meaning “stand before” (cf. Ger. *verstehen*, represented in Old English by *forstanden*). For this concept, most Indo-European languages use figurative extensions of compounds that lit. mean “put together,” or “separate,” or “take, grasp” (see [comprehend](#)).” –etymonline.com

Value: 13th century (noun), from Old French *value*, meaning “worth, value”. Noun use of *valoir*, “be worth”, from the Latin *valere*, “be strong, be well, be of value” (related to *valiant*). Used to mean “social principle” after 1918, presumably borrowed from the language of painting. Used as a verb to mean “to ascribe worth to” in the 15th century.

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