5
Creative Artists and Creative Scientists: Where Does the Buck Stop?

James Noonan and Howard Gardner
Harvard Graduate School of Education, USA

Extending the systems view

Imagine this scenario: Picasso, an innovator of early twentieth-century modern art, is sitting in his studio in France in the 1950s. He has just received unsettling news from Spain. General Franco, the auto-cratic dictator long despised by Picasso, has given a nationally broadcast speech in which he praised the artist effusively. This bulletin alone, while distasteful, is not what is troubling him. Instead, he is replaying a passage from the speech in which Franco referred to one of Picasso's recent paintings and gave his considered interpretation. Believing—not entirely incorrectly—that Picasso had a longing to reconnect with the country he had not seen in decades, Franco suggested that this latest work reflected an important turning point in Picasso's career: unlike ear-lier paintings, this one represented deeply nationalist sentiments that had long lain dormant. Furthermore, Franco expressed his gratitude for Picasso's tacit but unambiguous endorsement of the regime.

For Picasso, this interpretation represented not only a complete distor-tion of his intent, but more dangerously, it risked co-opting his legacy and corrupting his reputation. That said, it was also true that Picasso *had* longed for attention and critical acclaim in his home country—so much so that he had briefly entertained accepting Franco's invitation to stage a retrospective exhibition in Spain. Nevertheless, Picasso knew that he had to speak out—to set the record straight and put distance between him and Franco—but he also needed to do so in a way that could preserve his artistic reputation in Spain and elsewhere.

This scenario represents one of many possible ethical dilemmas facing creative individuals: what to do when their work has not only been misunderstood but also misused and even abused. Across disparate domains, creative individuals tend to feel driven by a sense of responsibility to their ideas rather than to what others in the craft may have done. This devotion to ideas—and in particular, ideas that diverge from conventional thinking and ways of working—has at times transformed domains. Indeed, Picasso's impact on the visual arts was enormous: it changed the way painters, sculptors, and other visual artists approached their work and helped to define the modern era (Gardner, 2011a). More recently, one need only look to the multitudes of creative individuals populating the emerging high-tech industry for contemporary examples of domain-creating and domain-changing innovation.

These examples reflect a systems view of creativity. Instead of focusing on creativity simply or primarily as an individual characteristic, this perspective sees it as a dynamic process entailing the domain and the context in which individuals work (Csikszentmihalyi, 1996; Feldman, Csikszentmihalyi, & Gardner, 1994). In its most specified form, Csikszentmihalyi (1996) proposed that creativity—and the ideas and products born from creativity—emerge from the continual interaction of three nodes: creative individuals, the domain in which they work, and the reactions and actions of peers working in the same sphere. In most cases, once the creative contribution has been put into the world and validated by the field, the creative individual does nothing more. The creative ideas continue to evolve, occasionally inspiring subsequent innovations, but by that time the creators have often moved on to their next project.

Despite the often frenetic pace of innovation, we assert that creative individuals cannot, or at least should not, completely abdicate responsibility for their contributions. As such, we extend the systems view of creativity to consider what happens when a creative individual (or his or her contribution) is affected by subsequent events—what we are calling a post-creative development (hereafter PCD). This development could be a threat, as in the imagined scenario above, and it could take multiple forms: another individual, a group, a prevailing ideology, or a social movement. In order to be threatening, the PCD must be sufficiently *powerful* (politically, financially, or otherwise) to influence public perceptions or attitudes toward the contributor or to the creative achievement in such a way that the contribution could be misunderstood, misused, or abused by others. For example, the imagined threat from Franco took the form of both a powerful individual and a

comprehensive ideology. His influence—in Spain, at least—was nearly omnipresent; accordingly, he would have been able to make outrageous claims and imbue them with some credibility simply by virtue of speaking them out loud. However, a PCD could also be an opportunity. For example, a television network or an automobile company could decide to use Picasso's Cubist vision as the basis for its public brand, thereby bringing his work to the attention of millions of people who might otherwise not have encountered it.

In this chapter, we extend one of the nodes from Csikszentmihalyi's (1996) schema and consider it through the lens of ethics. In focusing on ethics, we make a deliberate contrast to mere politeness and morality, which define social expectations and guidelines for proper behavior. We also intend a contrast to obedience to the law, which sets a minimum expectation for all individuals in a society. We reserve the term and the realm of *ethics* for cases in which specific responsibilities are associated with specific roles. The prototypical cases here are the learned professions. We do not expect doctors or auditors or lawyers simply to behave cordially and to obey the law. Rather, over the years, we have come to associate and expect certain attitudes and behaviors on the part of those professionals—for example, physicians should not recommend treatment in which they have a financial investment, auditors should not have personal relations with their clients, lawyers should consider themselves as officers of the court. Applying this conception to the realms under consideration, we explore here whether there is a unique responsibility for individuals occupying the role of creator, regardless of the profession or line of work that they have chosen.

Accordingly, the dilemmas we discuss in this chapter pertain to questions of the right thing to do in the context of individuals' work. More specifically, we examine the relationship between creative individuals, their creative contribution, and the PCD facing them. Although there is a temporal aspect to this relationship—with the individual preceding the contribution, and the contribution preceding the PCD—we contend that both the individual and the PCD have unique relationships to the creative contribution. For this reason, as noted in Figure 5.1, we are focusing on the association between the creative individual and the development that follows his or her creation. Because creative individuals operate across diverse domains, we illustrate these associations using examples from the arts and sciences. These illustrations help us to demonstrate our central contention: when creative contributions across domains face developments that could either threaten or benefit them, it is the ultimate responsibility of the creative individual (1) to
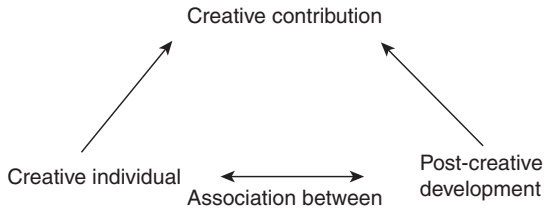
Creative contribution

Creative individual

Post-creative development

Association between

Figure 5.1 Extending the systems view of creativity to consider post-creative developments (PCDs).

identify the development (as either a threat or an opportunity); (2) to assess options for how to respond; and (3) if necessary, to take steps to counteract it. In what follows, we address both types of developments. We attend more closely to the threats since they place creators in a more vulnerable position where their ability (or inability) to respond is especially instructive. Further, we contend that appropriate responses are easier to effect when creators are members of an established profession, but that in no case is the creator relieved of their responsibility to respond.

The dimensions of ethical creativity

While there are many valid and instructive ways to analyze the ethics of creativity, we have chosen to focus on the two dimensions that demonstrate essential contrasts: (1) whether creative individuals *benefit* from the association or whether they are the *victim*; and (2) whether these creative individuals are *active* or *passive* participants. Let us illustrate these contrasts initially with the help of another scenario, this time with an imaginary protagonist as well as an imaginary scenario. Rosalind is a research scientist interested in genetics, and she has recently made a breakthrough in her work on DNA sequencing. First, it is important to recognize that creative individuals like this scientist may sometimes derive *benefits* from even the most ethically murky of associations. These benefits may be conferred on them in the form of financial windfalls or greater visibility for their work. Let us imagine that Rosalind learns that the military is interested in her work and has offered her a position as a high-level advisor. This position could afford her considerable influence in and beyond her field, not to mention potential financial benefits. Of course, it is also possible that she could be *victimized* by this association. If, for example, it turned out that the military wanted to adapt her innovation for use in developing biological weapons—or even if the

public or the scientists' colleagues *believed* this to be the case—then this association could injure her reputation and career.

Most ethical dilemmas facing creative people lie somewhere between the two extremes of this dimension. Potential benefits are often counterbalanced by potential costs. Similarly, an association that may seem initially beneficial (an opportunity) may wind up being enormously destructive (a threat). For example, consider what happens when creative individuals associate themselves (or become otherwise associated) with political regimes and then the regime or administration changes. (Other changes in political contexts can also prompt creative individuals to abandon once promising associations. For example, the Arte Povera movement in Italy in the late 1960s initially attracted numerous adherents with the notion that art should be created from common materials. Once the movement became associated with increasingly radical and violent student demonstrations, however, the association no longer seemed productive. Many artists, including most prominently Alighiero e Boetti, consciously sought to distance themselves from the movement; indeed, Boetti even changed his name. For him, nevertheless, this distancing resulted in a very successful reinvention, inasmuch as he is now best known for the work he created *after* the Arte Povera movement (see Cotter, 2012).)

Regarding the second dimension, let us return to the imaginary scenario featuring Rosalind, the geneticist. Where we left her, she was facing an *active* choice about whether or not to take the offer as a military advisor; that is, she had some agency over how to manage her association with the military. She needed to determine whether this association was potentially threatening and, if so, whether the potential benefits outweighed any potential risks. This type of decision-making is, in many ways, a luxury. One could also imagine a scenario in which Rosalind published an influential book about her findings and might simply have her book bought en masse by the military with the intent of mining its contents for potentially destructive adaptations. In this case financial benefits would accrue to her *passively* through book royalties and her sphere of influence would be much more limited. After all, she would have no direct audience with the consumers of her ideas. However, it would be misleading to say that Rosalind would have no influence at all. As the originator of a creative contribution, she would retain considerable influence by virtue of her "bully pulpit." In the event that an innovator becomes aware that an innovation may be not only misunderstood but misused or abused, she or he faces an ethical choice about whether, when, and how to make use of this influence.

Table 5.1 Creative individuals facing post-creative developments along two dimensions

	Active	Passive
Beneficiary	**I**	**II**
	The Opportunist	The Reluctant Winner
Victim	**III**	**IV**
	The Unlucky Gambler	The Hostage

As already noted, the association between a creative individual and a threat may take many forms. In Table 5.1, we present four scenarios in which creative individuals might find themselves. In Quadrant I, we find the *Opportunist*, an active beneficiary who willingly associates himself or his work with a PCD in exchange for what he assumes will be positive consequences. In contrast, in Quadrant II, the *Reluctant Winner* recognizes that while an association with a PCD may extend some benefits to her, she is either unwilling to associate herself actively or she has no control over the association. In Quadrant III, the *Unlucky Gambler* (who may have started out as an Opportunist in Quadrant I) willingly associates himself or his work with a PCD, but this association turns out to have negative consequences. In Quadrant IV, the *Hostage* has her work unwillingly associated with a PCD, either as a paragon (as in our imaginary example with Picasso and Franco) or possibly as a foil to be demonized—and this association has negative consequences.

In subsequent sections of this chapter, we first provide idealized portraits of a creative individual who might typify each quadrant. Moving away from "ideal types" (Weber, 1958), we supplement these portraits with snapshots of artists or scientists who faced similar dilemmas in their work.

Quadrant I: The Opportunist

Mr. A is a painter living in a country that has recently experienced considerable social upheaval. Inspired by the sweeping rhetoric of a candidate for national office, Mr. A begins experimenting with new media. Without his having expected it, his dynamic works, filled with popular images, quickly become picked up and peddled by the candidate's campaign. As a result, Mr. A's profile as an artist is elevated considerably. In addition, he is given new commissions and high-visibility art shows at nationally respected museums. He does nothing to distance himself

from the campaign; on the contrary, he promotes it. Some call his work "propaganda," but Mr. A says that his work is merely the result of his personal inspiration. He willingly decides to produce new work that the campaign can use in fundraising. By first allowing his work to be associated with a PCD (in this case, a campaign that sees its message reflected in the art) and then actively pursuing this association, Mr. A's financial prospects and visibility benefit.

Like many other people, graphic designer and illustrator Shepard Fairey first heard Barack Obama speak at the 2004 Democratic National Convention and liked what he heard. In 2008, with the Democratic primaries heating up and early indications that Obama and Hillary Clinton would be engaged in a prolonged fight for their party's nomination, Fairey ran into Los Angeles publicist Yosi Sergant at a party and shared his support for Obama. At the time, Sergant was working as a media consultant for the Obama campaign; he suggested to Fairey that he do something as an artist to show his support. The next day, Fairey called him to ask if the Obama campaign would mind if he made a campaign poster (Mcdonald, 2008). Since he had been arrested 14 times related to his guerrilla-style street art and was aware that he could be a potential liability to the campaign, Fairey wanted to get the go-ahead from someone close to the campaign. In addition, much of his recent work had been critical of capitalism and nationalism, and he conceded that "a person who is a blindly nationalistic type could try to spin my work as being un-American or unpatriotic, and I was afraid that . . . my poster for Obama could be perceived as the unwelcome endorsement" (Shorrock, 2009).

Nonetheless, two weeks before Super Tuesday, the campaign gave Sergant (and Fairey) its tacit endorsement. In less than a week, Fairey designed and printed the first run of his now-iconic HOPE poster, distributing 350 on the street and selling another 350 through his website. (The initial run of posters actually featured the word PROGRESS as a caption. In an interview after the election, Fairey explained that he received feedback from people that "hope was the message that the Obama campaign really wanted to push" (Shorrock, 2009).) The image-reproduced on posters, stickers, and T-shirts and shared through social media outlets—soon went viral, spawning numerous caricatures and imitators. The visibility and positive press immediately injected Fairey's name and reputation into the mainstream. Within months, buoyed by

an overwhelming public response to the poster, the campaign commissioned "official" posters, done in the same style but using photographs that it had clearance to reproduce; moreover, campaign managers began selling the posters through the official campaign website for $70 each. Fairey also received a personal letter from Obama thanking him for "using his talent in support of my campaign" (Shorrock, 2009).

The benefits to Fairey of his association with the campaign were considerable. While many of his posters were reproduced and distributed at no cost, he sold many more through his website (although he contended that any proceeds were reinvested in producing more posters or donated directly to the campaign). Perhaps more enduringly, though, Fairey earned name recognition from the poster that he assuredly would not have had otherwise. He also earned credibility that transcended his reputation as a street artist or graphic artist, with *Time* magazine commissioning a version of the image for its Person of the Year cover at the end of 2008 and the campaign commissioning an original design for its official inauguration poster. In addition, in early 2009 an original print of the HOPE image was obtained by the Smithsonian Institution's National Portrait Gallery; soon thereafter, Fairey had his first career retrospective solo art show at the Institute of Contemporary Art in Boston (Edgers, 2009).

By inserting himself so explicitly into a national campaign and its accompanying spotlight—and as a result of the attention he garnered—Fairey also invited increased scrutiny. This scrutiny included a widely publicized legal dispute with Associated Press over copyright infringement that was initially settled out of court, but that reemerged after it was discovered that Fairey had destroyed evidence in the case (Kennedy, 2012). Even so, Fairey sought to use the negative press to push a conversation about fair use and "artistic freedom"; his views on the topic surely attract more attention (and arguably his opinions carry more weight) as a result of his well-established association with Obama (Fairey, 2012).

Although the artistic style embodied by the HOPE poster was not new to Fairey, associating himself and his work with a highly visible public figure represented a clear departure from his previous work and way of working (which was characterized by posters or stickers clandestinely—and often illegally—installed in public spaces). This shift, and Fairey's association with the PCD of the Obama campaign, conferred on him considerable benefits. Indeed, the iconic image ensured future commissions and future potential consumers. Even the legal actions against him seemed unlikely to blunt these benefits.

Quadrant II: The Reluctant Winner

The B's are a popular band whose new genre-bending song has received considerable airplay and elevated the band's public profile. Seeking to capitalize on The B's popularity with the youth demographic, the widely popular President mentions the band and their song by name in a nationally televised speech that is then rebroadcast on several networks. The unspoken implication in the President's remarks is that The B's support his policies. Although personally opposed to the President and his policies, The B's recognize that this association may have tremendous financial benefits for them. It could also expand their fan base. In addition, taking a political stand against the popular President could very well alienate legions of existing fans. After some deliberation, they opt to adopt a "wait and see" approach and do nothing. Although they did not seek out the benefits they are likely to receive, they decide that an association with a popular public figure is a post-creative development worth accepting.

On more than one occasion, the country songwriter and recording artist Gretchen Peters found herself a Reluctant Winner; in both cases she found ways to make peace with the benefits she received. In 1994, Peters wrote a song called "Independence Day" about a woman in an abusive relationship and was entitled to her share of the proceeds any time the song received airtime or was used in advertisements. Peters also was transparent about her politics, aligning herself comfortably with left-wing or progressive causes. A dilemma arose when conservative commentator Sean Hannity began using "Independence Day" as the lead-in song on his popular nationally syndicated radio show.

Peters had a decision to make. On the one hand, Hannity's use of her song meant that she received considerable financial royalties. In addition, the national exposure she received could indirectly lead to an increase in record sales from Hannity listeners who liked her music. On the other hand, Peters recognized that Hannity had either misinterpreted or willfully ignored the intent behind the song; a song that was not, as he seemed to think, a paean to American liberty, but in fact a rallying call for abused women. Furthermore—and perhaps more importantly—the association between Peters' song and Hannity's show, if left uncommented on, could be interpreted as an endorsement by Peters of Hannity's politics. In this way, Peters recognized the potential

of the association with Hannity as a potential threat to her reputation. She also understood that it was an association that she did not seek, but that could—depending on the decisions she made—benefit her.

With these considerations in mind, Peters decided to do two things. First, she decided—unlike many recording artists whose songs are employed for political candidates or causes they find disagreeable[1]—*not* to issue any cease-and-desist orders. On the contrary, she encouraged Hannity's use of the song for his radio show. Second, she announced publicly that any proceeds she received from Hannity's use of the song would be redirected into political causes of her choice. (These included the American Civil Liberties Union and the political action website MoveOn.org.) By making a public statement, Peters asserted her influence over her work as the creative individual. She employed similar tactics during the 2008 presidential race when the song was used at a rally for vice presidential candidate Governor Sarah Palin. In her public statement about the song's use, Peters said the campaign was "co-opting the song, completely overlooking the context and message and using it to promote a candidate who would set women's rights back decades" (as quoted in Shelburne, 2008). As with her response to Hannity, Peters announced that she would donate the royalties received during the election cycle to Planned Parenthood, and do so in Sarah Palin's name. Through these choices, she was able to accept the windfall that her song's association with PCDs bestowed on her, while also preserving her sense of artistic and creative integrity.

We recognize that the decisions Peters made could be perceived as an "active" stance, but we note that these decisions reflect her *response* to the PCD. We see Peters as a passive beneficiary, because she did not seek out any of the benefits accruing to her. Once she had realized that her work was associated with a PCD, though, she had decisions to make. We contend that all creative individuals—whether they actively seek out a relationship to a PCD or whether the PCD finds them instead—must undergo a similar reflective process about whether and how to respond.

Quadrant III: The Unlucky Gambler

Ms. C is a popular and well-respected filmmaker. She has made feature films and documentaries that have received widespread critical acclaim for their innovative techniques. Among Ms. C's very public fans is the increasingly autocratic leader of her country. Initially flattered and grateful for the exposure that this association brought her, Ms. C sought

> *out the attention of the leader and arranged private screenings for him. However, recently she has become alarmed by statements that she considers aimed squarely at reducing her artistic independence. For example, in a recent speech the leader referred to works as "my movies." Furthermore, he dismissed her earlier body of work—films that had earned accolades from around the world and sealed her reputation as an innovative filmmaker—as "experimental garbage." The association is not only no longer fruitful, but also it seems that it may threaten her career and livelihood.*

The classic—some might say clichéd—example of an Unlucky Gambler is the German filmmaker Leni Riefenstahl. Originally an actress, Riefenstahl had her directorial debut in the 1932 film *The Blue Light*, a work that received critical acclaim and played to full houses across Europe. However, she is best (and most notoriously) known for her association with Hitler and the Nazi Party in the years before the Second World War. According to Trimborn (2007), Riefenstahl sought out the association. After being mesmerized by a speech at a Nazi rally in 1932, Riefenstahl wrote a letter to Hitler and requested a face-to-face meeting. To her surprise, and delight, he accepted her request and the two met. During this meeting, Hitler allegedly implored her that, should the Nazis come to power, she "must make my films" (as quoted in Trimborn, 2007, p. 60). When Hitler became Chancellor the following year, he enlisted Riefenstahl to film Nazi rallies in Nuremberg in 1933 and 1934; the latter, released as a film called *The Triumph of Will*, became widely considered a model of Nazi propaganda.

However, Riefenstahl would perhaps be far less renowned if she was remembered solely as a propagandist. In addition, she was widely credited as an innovative and path-breaking documentary filmmaker; the primary case in point being her two-part documentary of the 1936 Berlin Olympics. Buoyed by government funding and support at the highest levels of the Nazi party, Riefenstahl spared no expense, traveling to Greece to film the torch-lighting and relay, using stop-gap techniques to have actors appear to morph from ancient Greek to contemporary athletes, putting cameras on cranes or tracks to better document motion, and employing slow-motion photography (Trimborn, 2007). In many ways, she was a predecessor of contemporary sports photography. Riefenstahl's active pursuit of an association with Hitler and the Nazi regime (in this case, the PCD) led to nearly unlimited resources

and unparalleled distribution, both of which enabled her to experiment with techniques that burnished her reputation as an innovator.

When the war ended, though, so too did the benefits this association extended to Riefenstahl. When she was detained and interrogated by American soldiers, she struggled to reconcile the horrors of the Holocaust with "Hitler, as I knew him" (as quoted in Bach, 2008, p. 226). Indeed, she insisted throughout the rest of her life that the association was innocuous and that she was uninterested in politics. In this way, Riefenstahl is a prime example of a creative individual who could not capably respond to PCDs, because she was never able (or never willing) to identify them as threatening. By distorting the influence of Hitler and Nazism on her work, she undermined her own reputation. For that matter, this refusal to acknowledge the threat posed by Hitler was responsible for the end of her film career. Lacking the support and patronage of the Nazi party, it took Riefenstahl another 10 years to complete the film she was working on when the war ended. However, many film festivals refused to show it and she never made another, turning instead for her livelihood to photography and memoir writing.

Another example: Many of the scientists working on the Manhattan Project in the early 1940s—like Eugene Rabinowitch, Joseph Rotblat, and Hans Bethe—believed that associating themselves and their expertise with the US government was not only necessary but also the right thing to do under the circumstances. Fearful that Germany might unlock the potential of atomic energy and develop and use nuclear weapons, these scientists were convinced that it was imperative to win the arms race. In this case, the PCD might be characterized as the perceived German threat and the US military's perceived need to counteract it, which came to be known as the Manhattan Project. The association of scientists' expertise with the military motives of the US government was enormously productive, although it was hardly beneficial to the scientists in conventional ways. They received no financial windfall for their participation. Moreover, since the project was top secret, they received no boost to their reputation either. Their work was seen as an act of unselfish patriotism.

However, as the war proceeded and it became apparent that Germany was not working to complete an atomic bomb, many scientists began to question this association. Rabinowitch and a vocal cohort of colleagues on the Manhattan Project clearly recognized the potential negative side effects of the association; accordingly, they formed a secret committee of scientists associated with the project. The so-called Interim Committee met in secret for a week in early June 1945 to draft what came

to be known as the Franck Report, named after Nobel Prize winner James Franck (Price, 1995). Rabinowitch took primary responsibility for drafting this widely heralded treatise, which recommended that atomic weapons be put in control of international bodies and never used on civilian populations. Delivered to the Secretary of War in June 1945, the Franck Report urged that nuclear weapons be demonstrated "before the eyes of representatives of all the United Nations, on the desert or a barren island" and urged the United States to refrain from using the atomic bomb on Japan, calling an early and unannounced attack "inadvisable" (Dannen, 1998).

While having little if any impact on government decision-making, the Franck report foreshadowed an increased political awakening for many scientists. In 1945, Rabinowitch co-founded the Atomic Scientists of Chicago (later the Educational Foundation for Nuclear Science), an organization open to "[a]ny past or present member of the Manhattan Project" and whose goals were to "clarify . . . the responsibilities of scientists in regard to the problems brought about by the release of nuclear energy" and to educate the public on these matters (Atomic Scientists of Chicago, 1945). (Perhaps the best-known initiative of the *Bulletin* is the Doomsday Clock, a meme meant to convey "how close humanity is to catastrophic destruction"; see http://www.thebulletin.org/content/doomsday-clock/overview). In 1952, Rabinowitch wrote that "the explosion of the first atomic bomb . . . led to a decisive change in the political consciousness of scientists" (Rabinowitch, 1952, p. 314). Scientists like Rabinowitch "gambled" on a PCD in that they willingly associated their expertise with seemingly noble and patriotic aims. The association brought them no benefits beyond intrinsic rewards, and the signers of the Franck report worried that the association could imperil their reputation. To counteract this perceived threat, Rabinowitch and others drew on their sense of professional ethics (Slaney, 2012), a notion to which we return later in this chapter.

Quadrant IV: The Hostage

The recently published book of poetry by Ms. D was an international sensation. In its treatment of global climate change, the verse was both innovative and evocative. It spawned several imitators, and initially seemed as if it were changing the way in which poets and artists of all stripes portrayed the environment. Within the year, however, corporate lobbyists in her country undertook a campaign to discredit her, calling

her a propagandist on behalf of environmental groups and describing her poetry as anathema to national values. In many states, similar localized campaigns resulted in her book being publicly pilloried and even banned from schools. Before long, other artists began to distance themselves from Ms. D. Her prestige and financial security evaporated. Reluctantly, so as to distance herself from the excoriation, she emigrated. The new start, she hoped, would enable her to continue writing and publishing. Ms. D did not seek to be a spokesperson for any social movement; rather, this perception emerged out of an association between her work and a PCD. The backlash against this perceived association—unsought and, in Ms. D's case, undesired—wound up imperiling her reputation and her livelihood.

Erich Maria Remarque was conscripted into the Germany army in November 1916. While little is known about his experiences as a soldier, his war novel, *All Quiet on the Western Front*, quickly became an international sensation when it was published in 1929. Widely considered one of the finest novels about the First World War, the book was initially refused by several publishers who believed that readers were not yet ready to relive the war years. This skittishness on the part of publishers may have been in part because Remarque's view of the war was decidedly less than glorious, presenting a vivid and disturbing picture of a "lost generation" of young people disillusioned and psychologically scarred by their war experiences. However, contrary to the publishers' expectations, this picture resonated with thousands of returning soldiers and with a broad readership of war-weary individuals on all sides of the conflict. In his first-person novel, Remarque presented readers with a tangible manifestation of the otherwise "unknown soldier" who acted as an Everyman, enabling readers to imagine that their suffering (or that of their families or friends) was shared. Cultural historian Modris Eksteins remarked that "[t]he great discovery that foreign readers said they made . . . was that the German solder's experience of the war had been, in its essentials, no different from that of solders in other nations' (1990, p. 296). To say the least, it was a narrative that did not lend itself well to the patriotic stirrings of a surging tide of nationalism.

The book's meteoric rise was soon matched by an equally swift fall, at least in Germany. It was quickly taken up as a foil by the ascendant Nazi Party, which prioritized rearmament and relied for its support on a renewed and virulent strain of nationalism. The German military

referred to the book as pacifist propaganda that was "a singularly mon-strous slander of the German army" (quoted in Eksteins, 1990, p. 288). In 1930, one Nazi state minister banned the book from schools; and after Nazi hooligans disrupted showings of the film adaptation, it too was banned, ostensibly for the protection of the German people. Once the Nazis came to power in 1933, Remarque's books were burned as "politically and morally un-German" (quoted in Eksteins, 1990, p. 298). By the end of that year, copies of the book were seized from the pub-lisher and ordered to be destroyed by Minister of Propaganda Joseph Goebbels.

In such a volatile political climate, creative individuals confront the threat of having their work unduly influenced or suppressed altogether. Like many of his contemporaries, Remarque faced a choice: given this threat, how could he respond in a way that preserved his reputation and that of his work? In 1930, a little more than a year after the book's publication and with signs that its association with the Nazi party was a potentially negative PCD, Remarque sought refuge in Switzerland (with detours to New York and Hollywood, where he helped adapt his book for film). Remarque's decision to seek exile abroad was based in part on the decisions made by many creative individuals living under autocratic regimes: only by leaving the context in which his creative contribu-tion (and, by extension, his reputation as a writer) was being abused could he effectively respond to the threat that this association posed. The association between the Nazi party (in this case, a PCD) and himself was neither sought nor beneficial to Remarque; only by putting physical distance between himself and the Third Reich could he blunt the threat. As a result of this distance, he was able to continue writing, but, just as importantly, he was able to preserve his and his book's reputation. (An even more esteemed writer, Thomas Mann, made similar career and life decisions.)

An example from a quite different realm: After years of reanalyz-ing data culled from a national survey on social capital to try to find alternative explanations, political scientist Robert Putnam shared what he learned: communities with greater diversity tend to have less trust among neighbors, lower rates of voting, lower likelihood of donating to charity (see Putnam, 2007). Indeed, a spectrum of indicators of civic health appeared to be lower in more diverse communities. This find-ing seemed at odds with Putnam's reputation as a liberal academic that placed him "squarely in the pro-diversity camp" (Jonas, 2007). Not surprisingly, these dystopic results quickly attracted attention from

conservative politicians and anti-immigration groups, including a favorable commentary on the website of former Ku Klux Klan leader David Duke, as proof that large-scale immigration had a deleterious effect on the fabric of American life. This co-optation of his findings posed a threat to the substance and integrity of Putnam's work (and, conceivably, to his reputation as a social scientist).

Anticipating that his findings would be co-opted in precisely this way, Putnam did two things. First, he supplemented his findings with commentary about how communities could, with time and judicious policy intervention, overcome the negative correlation between diversity and social capital. He suggested that while "in the short run there is a tradeoff between diversity and community...wise policies (public and private) can ameliorate that tradeoff" (Putnam, 2007, p. 164). In fact, in an interview with the *Financial Times*, Putnam asserted that he delayed publishing the research until he could develop proposals to counteract the negative effects of diversity, saying that it would have been "irresponsible" to publish his article without such commentary (Lloyd, 2006). This action was seen as suspect by some who claimed that the role of social science researcher required one to maintain a disinterested stance and refrain from social commentary. However, others viewed Putnam's publication (even with the coda) as an act of professional responsibility: that he had an obligation to share inconvenient truths and did so. Second, once the commentaries from people like Duke came as predicted, Putnam tried to respond in kind, giving interviews and making public appearances to press his point. Rather than leave his work to the world of commentators—both those who understood his intent and those who abused it—Putnam made the decision to be an active participant in the debates and discussions prompted by his findings. Having not sought out the association with a PCD (in this case, widely derided commentators like Duke), Putnam nevertheless recognized that without intervention this association posed a threat to his reputation as a social scientist.

In this way, Putnam's actions were compatible with the actions taken by two previous examples. Gretchen Peters (in our parlance, a Reluctant Winner) similarly perceived that an unsought association with a PCD—even though it conferred on her financial and other benefits—demanded intervention. Similarly, Eugene Rabinowitch (an Unlucky Gambler) determined that his active association with the Manhattan Project required recasting if he was to preserve his reputation and set a model as an ethical scientist.

Crossing quadrants: Evolving PCDs and evolving responses

As we noted earlier, the neat classification of creative contributors into four quadrants is useful for understanding the phenomenon that we have been investigating. However, the formulation does not capture the fact that creators' association with PCDs, and their attendant responses to them, often evolve over time and across contexts. Several of the examples above could also be used to illustrate this point, but as it happens, one of the authors of this chapter (Howard Gardner) has had the opportunity to observe post-creative developments in his own professional life.

As is well known, at the beginning of the twentieth century the French psychologist Alfred Binet devised the first intelligence tests. His goal was clear: to allow the early detection of potential scholastic problems and to encourage interventions that would help an intellectually challenged population of young people to succeed in school. Shortly after intelligence tests were devised, they became standardized (and popular) in the United States (and other countries). Rather than being used as an early warning sign, however, Binet's tests (and their offspring) quickly came to be used as ways of classifying students altogether. Those who did well were treated as academically talented and were often given special opportunities, such as enrolment in programs for "gifted and talented youth." Conversely, those who performed poorly were often considered uneducable: they frequently received less skilled teaching and sometimes they were segregated from peers and deprived of teaching altogether.

Many years later, Gardner was part of a group of psychologists who were critical of standard intelligence theory and regular intelligence tests. In Gardner's case, as part of his theory of multiple intelligences (MI theory), he proposed that human cognition is better described as a set of relatively autonomous intellectual faculties, which he dubbed the multiple intelligences (Gardner, 1983). He also resisted the urge to declare these faculties as immutable; indeed, on the basis of scattered evidence, he argued that any intellectual faculty could be enhanced through a combination of good teaching, adequate pedagogical resources, and strong motivation on the part of the learner.

While receiving considerable criticism from within the psychology (and particularly the psychometric) community, MI ideas were quickly embraced by educators; initially in the USA, ultimately in many other countries in the world. At the beginning, Gardner was the *beneficiary*

of these post-creative developments; they added both to his fame and (modestly) to his fortune. Gardner was mostly a passive beneficiary (Quadrant II): he did not proselytize, but he sometimes benefited even when he was not in sympathy with his benefactors.

However, a wake-up call occurred in the early 1990s. Gardner learned that, in an Australian state, young people were being classified in terms of the intelligences that they possessed and ones that they lacked. This claim went well beyond Gardner's own research. The wake-up call turned into a smoking gun when the Australian project listed the major ethnic and racial groups in the state, along with a claim about which intelligences they allegedly possessed and which they allegedly lacked. Not only was there no empirical evidence for this claim, Gardner also saw the claim as potentially dangerous, because it could become a self-fulfilling prophecy and as a stimulus for destructive social policies. This event, along with a few other similar ones, caused Gardner to change his stance considerably. He could no longer be a passive beneficiary; the association between his ideas and how they were being used had changed significantly. Because his ideas were being misused and abused, the integrity of the ideas was at risk (and so, too, was Gardner's reputation). He was still passive in that he had not sought an association with the Australian state, but he was now at risk of being victimized by this association if he did nothing (Quadrant IV).

After reflecting on the PCD, Gardner responded in three ways. To begin with, he went on television in Australia and critiqued the educational intervention; soon thereafter it was cancelled. Then, too, he wrote an article in which he separated out the myths and realities of MI theory (Gardner, 1995); the article was reprinted in many venues, and remains the most often cited by Gardner's colleagues in education. Third, and most significantly, within a year or two, working with distinguished colleagues, Gardner launched a project that was initially called "humane creativity." A particular challenge for the project was to determine how one could help to ensure that creative inventions would be used responsibly. As part of this project, Gardner and colleagues now spend much of their time trying to help individuals direct their skills—creative and otherwise—to positive, beneficent use. In our terms, they have shifted from being reluctant beneficiaries to becoming active users of the bully pulpit. One of the key findings of this project, now called the GoodWork Project, now called the Good Project (see thegoodproject.org), has been to understand the contributions of professional status to ethical and responsible decision-making (Gardner, Csikszentmihalyi, & Damon, 2001); it may also have helped to catalyze this volume.

The mediating role of the professions

Creative individuals can be found in any domain: in the arts, in business, in commerce, or in a well-established profession. Being part of a profession bestows on its members considerable benefits: for example, the prestige that accompanies a trustworthy and widely known credential (like admission to the bar or a medical degree). However, these benefits are not without costs. When individuals are inducted into an established profession, part of the cost of admission is their implicit agreement with the ethical strictures that govern that profession. Ethical codes guide professionals in determining the "right thing to do" when their personal interests or values are in conflict with the professional standards. Gardner (2011b) calls these professionally derived strictures the *ethics of roles* and argues that they are of increasing relevance for professionals. To use one of the above examples, Putnam is a political scientist. As such, he is enjoined to carry out his research objectively and to report his findings in a straightforward way. And once his "creative work" has gone public, he is expected to share his data, to explain his findings, and, as warranted, to incorporate new data into his conclusions.

In contrast, artists do not enjoy the benefits (nor the requirements) of the professions. Despite the advent of numerous credentialing mechanisms—for example, the proliferation of university-based MFA degree programs—these credentials are not required to be an artist. Anyone can make art. As such, artists, like other creative nonprofessionals, have no professional responsibilities beyond those of citizenship: minimally, they need to obey the law and try not to hurt anybody. Although it has a long history and many traditions, painting (like other forms of artistic production) is not a profession. Being a scientist used to have more in common with the artist. Tinkerers and amateurs like Michael Faraday and Alfred Russel Wallace did not belong to recognized professional cohorts, nor did they have any responsibility to their fields of study as such. (Despite having only a basic formal education, Faraday discovered electromagnetic induction, which in turn led to the widespread and practical use of electricity. Wallace, originally a surveyor, is credited as the co-discoverer of the theory of evolution.) These nineteenth-century "gentleman scholars" could make discoveries, put them into the world, and had little professional responsibility beyond that. But today, with myriad subspecialties and established credentialing agencies, more firmly established responsibility accompanies scientists' professional status.

The ethical standards that accompany professional status provide critical guideposts in helping individual workers to resolve ethical dilemmas. On the face of it, this state of affairs would suggest that creative contributors working in professions are better positioned to make ethical decisions than their counterparts in the creative non-professions, with professionalism acting as an important bulwark against ethical misconduct. However, this inference may go too far. As we have argued above, in responding to threats and resolving ethical dilemmas, creative individuals *across domains* should undertake a similar discernment process. At most, the clarity of roles and role requirements offer professionals an additional *resource* in resolving dilemmas. Creative non-professionals must rely more heavily on informal social networks and their individual discernment. Accordingly, there is likely to be greater variability in how non-professionals respond when confronted with similar ethical dilemmas.

In our view, irrespective of the domain in question, creative individuals must undertake a similar discernment process when their work is associated with a PCD; see Figure 5.2. First, they must *identify the development as such*, whether it be regarded as a threat or more as an opportunity. Ideas and products can be put into the world and used in innumerable ways. Often these ideas form the foundation for subsequent innovation, as Einstein's theories of relativity led to new ways of conceptualizing space exploration and our understanding of the origins of the universe. The vast majority of these uses are not threatening and so do not require a response from the creative individual. However, when innovations are susceptible to misinterpretation, misuse, or abuse, it is imperative that the association be first identified as such.

Such turns of events may not be immediately apparent, as in the case of Einstein's initial decision to catalyze the US government's efforts to build an atomic bomb. Approached by his colleague Leo Szilard who was concerned about unsecured uranium deposits in Congo, Einstein believed he had a responsibility to alert the government to
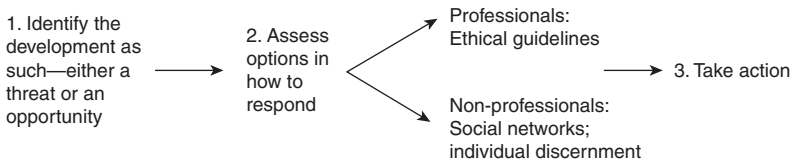

Figure 5.2 Process of responding to post-creative developments.

the possibility of Germany's using uranium to build an atomic bomb. Accordingly, in 1939, he sent a letter to President Roosevelt to this effect. Later, Einstein realized that his association with the Manhattan Project could pose a threat not only to his ideas and their legacy, but more importantly to those populations on whom the bomb could be used. He swiftly moved on to the next step for creative individuals responding to threats: he sought to *assess his options in how to respond*.

This assessment is where the difference between professionals and non-professionals is clearest. For individuals working in established professions, there are often ethical codes and role requirements that provide important guidance. For non-professionals, the lack of clarity leads to greater variability. In Einstein's case, by the time he was confronted with this dilemma, physics had become an established profession with numerous professional associations. In fact, Einstein even served as president of the German Physical Society—physics' oldest professional association—from 1916 to 1918. However, nuclear physics was an emerging subdomain within physics and the debate over how nuclear fission could or should be used (especially in the service of the war) was still an open question. (By the end of the war, with the benefit of hindsight, this was a more settled question. Many of the physicists and chemists who had participated in the Manhattan Project, like Eugene Rabinowitch, mentioned earlier in this chapter, drew on their sense of professional ethics to oppose the nuclear arms race.) Accordingly, in addition to his professional judgment, Einstein also looked to his social network to assess his options, writing letters of concern and seeking counsel from colleagues like Leó Szilárd and Niels Bohr (Isaacson, 2007).

Finally, having assessed his options, Einstein needed to decide just how to respond and then *take action*. In his case, having scant evidence that the Germans were working on an atomic bomb and not convinced that the bomb's use would be necessary to end the war in Japan, Einstein wrote an urgent letter to President Roosevelt in the spring of 1945 expressing his concerns. There is no evidence that Roosevelt read it before he died in April. After bombs were dropped on Japan (during the first months of the Truman administration), Einstein was devastated and lamented how much weight his 1939 letter was said to have carried in launching the whole enterprise. When questioned about his role by *Newsweek* in 1947, he said, "Had I known that the Germans would not succeed in producing an atomic bomb … I never would have lifted one finger" (as quoted in Isaacson, 2007, p. 485). Like his professional

colleagues who founded the Federation of Atomic Scientists and the *Bulletin of Atomic Scientists*, he devoted much of the rest of his life to advocating publicly for a world government and universal disarmament.

Conclusion: Where the buck stops

In all of the cases described in this chapter, creative individuals and their contributions encounter unanticipated developments; they are faced with the question of whether to act, and, if so, how strongly and in which ways. The association between the individuals and these unanticipated developments may look considerably different across cases: in some the association is actively sought and in others it comes as a surprise; in some the association bestows considerable benefits on individuals while in others it exacts considerable costs. In all of the cases, though, the response most properly resides with the creative individual themselves. In responding to a powerful and influential threat, similarly powerful and influential forces are needed; these can only come from the individual responsible for the idea or work under threat. Creative individuals are not responsible solely *for* ideas; as we have argued, they are also responsible *to* ideas, and this responsibility extends well beyond the moment at which they put their ideas into the world. Each of the artists and scientists we have considered in this chapter recognized this principle to varying degrees and relied on different resources when responding.

Those individuals who worked in an established profession, like physicist Eugene Rabinowitch or political scientist Robert Putnam, had more firmly established ethical guidelines on which to draw. Those individuals working in emerging professions or creative non-professions, like Gretchen Peters or our lightly fictionalized Picasso, needed to draw more on informal social networks and on their individual powers of discernment. In all cases, though, the "buck" stopped with the creative individual. Returning to Csikszentmihalyi's nodes, we offer this observation: although individuals may draw on the traditions of their domain and the wisdom of their peers in the field for guidance, the ultimate responsibility for creative contributions when they are threatened rests firmly and solely with the individual. Once ideas are in the world, individuals whose livelihood and reputations are often bound up in their ideas must exercise a restrained but firm grasp on how they are used. This is no easy task—more of an art than a science, one might say—but it is the ethical responsibility that accompanies creativity and innovation

in all domains. In that sense, the incredible joy that accompanies a fundamental discovery or an original creation may ultimately be balanced by a fearsome responsibility.

Note

1. And there are many examples: during the 2008 presidential campaign alone, Republican candidates received cease-and-desist orders, open letters, or public chastising from John Mellencamp, Jackson Browne, Heart, Boston, Orleans, and the Foo Fighters. See http://www.rollingstone.com/music/news/ stop-using-my-song-republicans-a-guide-to-disgruntled-rockers-20081010.

References

Atomic Scientists of Chicago. (1945). *Bulletin of the Atomic Scientists of Chicago, 1*(1), 1.

Bach, S. (2008). *Leni: The Life and Work of Leni Riefenstahl*. New York: Vintage Books.

Cotter, H. (2012). Alighiero Boetti Retrospective at Museum of Modern Art. *The New York Times*, June 28. http://www.nytimes.com/2012/06/29/arts/ design/alighiero-boetti-retrospective-at-museum-of-modern-art.html, accessed November 6, 2013.

Csikszentmihalyi, M. (1996). *Creativity: Flow and the Psychology of Discovery and Invention*. New York: HarperCollins.

Dannen, G. (1998). Atomic Bomb: Decision—The Franck Report, June 11, 1945. http://www.dannen.com/decision/franck.html, accessed September 14, 2012.

Edgers, G. (2009). Shepard the giant. *Boston Globe*, January 25. http://www. boston.com/ae/theater_arts/articles/2009/01/25/shepard_the_giant/?page= full, accessed November 6, 2013.

Eksteins, M. (1990). *Rites of Spring: The Great War and the Birth of the Modern Age*. New York: Anchor Books.

Fairey, S. (2012). The importance of fair use and artistic freedom. *Huffington Post*, September 7. http://www.huffingtonpost.com/shepard-fairey/statement- about-my-trial_b_1864090.html, accessed November 6, 2013.

Feldman, D. H., Csikszentmihalyi, M., & Gardner, H. (1994). *Changing the World: A Framework for the Study of Creativity*. Westport, CT: Praeger.

Gardner, H. (1983). *Frames of Mind: The Theory of Multiple Intelligences*. New York: Basic Books.

Gardner, H. (1995). Reflections on multiple intelligences: Myths and messages. *Phi Delta Kappan, 77*(3), 200–03, 206–09.

Gardner, H. (2011a). *Creating Minds*, 2nd edn. New York: Basic Books.

Gardner, H. (2011b). *Truth, Beauty, and Goodness Reframed: Educating for the Virtues in the Twenty-First Century*. New York: Basic Books.

Gardner, H., Csikszentmihalyi, M., & Damon, W. (2001). *Good Work: When Excellence and Ethics Meet*. New York: Basic Books.

Isaacson, W. (2007). *Einstein: His Life and Universe*. New York: Simon and Schuster.

Jonas, M. (2007). The downside of diversity. *Boston Globe*, August 5. http://www.boston.com/news/globe/ideas/articles/2007/08/05/the_downside_of_diversity/?page=full, accessed November 6, 2013.

Kennedy, R. (2012). Shepard Fairey is fined and sentenced to probation in "Hope" poster case. *ArtsBeat*, September 7. http://artsbeat.blogs.nytimes.com/2012/09/07/shephard-fairey-is-fined-and-sentenced-to-probation-in-hope-poster-case/, accessed November 6, 2013.

Lloyd, J. (2006). Study paints bleak picture of ethnic diversity. *Financial Times*, October 8. http://www.ft.com/intl/cms/s/0/c4ac4a74-570f-11db-9110-0000779e2340.html#axzz258ahNNWw, accessed November 6, 2013.

Mcdonald, S. (2008). Yosi Sergant and the art of change: The publicist behind Shepard Fairey's Obama hope posters. *LA Weekly*, September 10. http://www.laweekly.com/2008-09-11/columns/yosi-sergant-and-the-art-of-change-the-publicist-behind-shepard-fairey-39-s-obama-hope-posters/, accessed November 6, 2013.

Price, M. (1995). Roots of dissent: The Chicago Met Lab and the origins of the Franck Report. *Isis, 86*(2), 222–244.

Putnam, R. D. (2007). E pluribus unum: Diversity and community in the twenty-first century. *Scandinavian Political Studies, 30*(2), 137–174. doi:10.1111/j.1467-9477.2007.00176.x.

Rabinowitch, E. (1952). Ten years after. *Bulletin of the Atomic Scientists, 8*(9), 294–295, 314.

Shelburne, C. (2008). "Independence Day" writer donates to Planned Parenthood in Sarah Palin's name. *CMT Blog*, October 6. http://blog.cmt.com/2008-10-06/independence-day-writer-donates-to-planned-parenthood-in-sarah-palins-name/, accessed November 6, 2013.

Shorrock, R. (2009). Spreading the hope: Street artist Shepard Fairey. *Fresh Air*, January 20. National Public Radio. http://www.npr.org/templates/story/story.php?storyId=99466584, accessed November 6, 2013.

Slaney, P. D. (2012). Eugene Rabinowitch, the Bulletin of the Atomic Scientists, and the nature of scientific internationalism in the early Cold War. *Historical Studies in the Natural Sciences, 42*(2), 114–142.

Trimborn, J. (2007). *Leni Riefenstahl: A Life*. New York: Faber and Faber.

Weber, M. (1958). Religious rejections of the world and their directions. In H. H. Gerth & C. W. Mills (eds.), *From Max Weber: Essays in Sociology* (pp. 323–359). New York: Oxford University Press.