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On contemporary misdefinition of power and the importance of definitional fidelity

John F. Gaski¹*

Abstract: This paper's conceptual treatment documents a recent tendency in the literature to abandon the traditional definition of an important social construct: power. Naturally, such flexibility or looseness of conceptualization contains detrimental implications for operationalization and theory. When very different measures or manipulations are derived from incongruent conceptual definitions for a given nominal construct, it can produce uncertainty about the variable really being measured, from which a theoretical void follows. So, in this case, it is possible that many published studies and empirical findings ostensibly applying to social power, in fact, may not be. Thus, an entire literature stream appears to be misleading, even vitiated. Along with empirical grounding, remedial information is provided here to address the concern.

Subjects: Social Sciences; Power; Behavioral Sciences; Psychological Science; Psychological Methods & Statistics; Experimental Design & Research Methods; Social Psychology; Social Influence; Philosophy of Science

Keywords: classification; definition; experimental design; philosophy of science; social power

It is no accident that the scientific process begins with definition. Distinct definition of a construct is a prerequisite for accurate classification which, in turn, is the proximate fulcrum for theory and science (Rudner, 1966, pp. 14–22). "Definition and classification of terms and variables [are] an essential step in any area of inquiry that purports to use the scientific method. [T]here must be an



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PUBLIC INTEREST STATEMENT

Most academic writing is considered *basic* research, not applied. Therefore, it tends to be one or more levels removed from what could be of immediate interest to the layman. Most of the subject matter of this monograph is of that nature, thus not intended for the general audience.

However, the conceivable value for the non-academic layman in this work's content could be indirect. First, it may be revealing to witness abstruse detail of the scientific "sausage-making" process, to encounter the minute level of nuance academics fixate upon. Also, recognizing that the concept of social power—the article's focus—is perhaps the most fundamental in human behavior, deep understanding of that entity should be helpful background for the educated person's overall state of knowledge. Such "next-level" information is what the work-product endeavors to engender.









agreed-upon point of departure" (Engel et al., 1973, pp. 659–660). Lewis and Erickson (1969) also capture the importance of the scientific basics:

Unless there is agreement as to the "meaning" of a term, the result will be confusion rather than clarity and order. To encourage an arbitrary definition ... is to retreat from the first requirement of making a discipline scientific—that is, to provide a taxonomy within which one can classify (pp. 11-12).

Informed scholars know the scientific primacy of definition.

Such semantic attention is decidedly consequential, a truth that seems to have been misplaced or repressed occasionally. Fittingly, language has been itemized as one of the five "great disciplines of the mind" (Wilkie, 1981, p. 2) because of its role in reason and impact on knowledge. A classic reference nominates the primary aims of semantics: "(1) to help the individual think straighter; (2) to improve communication between individuals and between groups" (Chase, 1948, p. 249). Lundberg (1929, p. 54) foresaw "[t]he futility of much argument ... resulting from a poor definition of the terms employed." As far back as the formative years of behavioral research, Eubank (1927, pp. 386–400) proposed "criteria by which a term is to be accepted or rejected ... [or] tests of a true scientific concept":

(1) Is the term reasonably precise? Does it convey an exact and clear-cut meaning? (2) Does the term convey only one final idea? (3) Is the term perfectly general ...,always employed in the same sense wherever it is used?

Parallel definitions for a given word actually can be innocuous (ordinary homonyms, literally), but only if they are generally recognized and *not* of closely related meaning, to avert confusion (Menner, 1936, p. 231), e.g., the noun "bat" for flying mammal and baseball instrument. Otherwise, communication risks descent into gibberish, which is especially troublesome when the communication being attempted is scientific. That is, what if only one party within a communication dyad or network is using a particular definition? Disparate understandings do undermine communication.

Remarkably, a growing body of high-end research literature appears to renounce this tradition of precision in favor of arbitrary, revisionist, re-definitional perversion of one of the most basic constructs in behavioral science: power. That semantic disequilibrium provokes the objection and elaboration to follow.

1. The Central Concept: Social Power

The concept of power had long been subject to rather consistent understanding throughout behavioral science, as demonstrated by these classic definitions:

A has power over B to the extent that A can get B to do something that B would not otherwise do (Dahl, 1957, p. 203).

The power of actor A over actor B is the amount of resistance on the part of B which can be potentially overcome by A (Emerson, 1962, p. 32).

Power ... is the ability of one individual or group to get another unit to do something that it would not otherwise have done (Hunt & Nevin, 1974, p. 186).

Power is ... the capacity to influence behavior ... [t]he capacity of one party to influence the other party (Likert & Likert, 1976, p. 269).

Essential concurrence is offered by Burt (1977, p. 4), Cartwright (1965, p. 4), Pfeffer and Salancik (1978, p. 230), Russell (1938, p. 25), Simon (1953, p. 504), Weber (1947, p. 152), Winter (1973, p. 5), and Wrong (1968, p. 677). Thus is established a generally accepted definitional foundation, at least one that *had* received long-term general recognition.



To interject and be clear about a detail, briefly, because the specific power referenced applies to social relations, *social power* is the formal designation for the literal construct at issue, that is, capacity to shape the behavior of another individual or group. Hereafter, though, adopting the convention commonly practiced in social science, "power" is used as shorthand term for it (as distinct from the power concept in the field of physics, for example).

1.1. Intersection across Substantive Domains

The concept of power has considerable history in the literature of some allied fields beyond traditional behavioral science. Intra-organizational relations theory treats power as a core characteristic (Pfeffer, 1992), as does the inter-organizational area (El-Ansary & Stern, 1972). The field of consumer psychology has seen a surge of interest, with the construct incorporated into research and theory where little or no scholarly interest had been present previously (Dwyer, 1984; cf. Rucker et al., 2012). The power construct truly has transited from a particular focus of social psychology to a mainstay of multiple disciplines.

2. The Conceptual Problem: Definition

As Sloviter explains (2002, pp. 20–22)—while citing and echoing Socrates, Plato, and Einstein, no less—definitions should be stable. Theoretical chaos arises when someone begins using a new definition for a familiar construct and not everyone else in the field "got the memo." Naturally, such inconsistent usage, especially in the context of the scientific, theoretical, and conceptual, can cause confusion and dysfunction given the nature of the scientific enterprise and role of precise thinking and communication in it. This, regrettably, describes present conditions surrounding use of the term "power" in a significant body of literature.

Consider the putative definition of power that has been prominently displayed in the social psychology literature in recent years: "control over other people or valued resources" (Dubois et al., 2010, p. 199; Gal 2013, p. 1023; cf. Galinsky et al., 2008, p. 1451; Guinote, 2008, p. 238; Keltner & Robinson, 1997, p. 1067; Rucker & Galinsky, 2009, p. 549). Note the key difference from the traditional definition of ability to get others to do what they would not have done otherwise (distilling to the plainest of plain English). The neo-definition adds a conspicuous condition not present in the established one: control over resources in addition to control over human behavior. This renders the construct addressed by one definition different from that which is covered in the other. Let us call them, for now, the resource + behavior control and behavior control-only constructs. With definiendum "power" common to both, consummate incoherence from the field's perspective is introduced through violation of the law of transitivity. That is, if a = b and b = c, then a = c. Here, however, $a \neq c$. If definiendum power is the common element b, then definiens $a \neq definiens c$.

Ironically, the neo-component of the neo-definition, resource control, is akin to what already is established and familiar, and has a name. Since the time of pioneer power scholars French and Raven (1959), the pertinent variety of the resource-oriented construct has been widely known as power base. This is a power-related concept to be sure, but it is not power. (Of necessity, the classic behavioral science definition of power, as cited, is now in use here and will be throughout, unless otherwise noted.) In their seminal taxonomy, the specific power bases, which may underlie power, include resources such as the ability to mediate rewards (reward power base), ability to impose punishment (coercive power base), and real or perceived expertise (expert power base). Legitimate position in a hierarchy is known as the legitimate power base, and personal charisma or attractiveness defines the so-called referent power base.

These listed resources qua capabilities may yield power for those who possess them. In fact, they are likely to but may not, depending on other circumstances such as countervailing power (French & Raven, 1959, p. 260) or mutual dependence (Emerson, 1962). As such, power bases are not isomorphic with power. (To possibly roil things further on the subject of "may yield power," when a given power base, say reward, does succeed in generating power for the one who



possesses that base, the power derived would properly be called *reward power*. The power that comes from the capacity to punish is known as *coercive power*. If one's power is ultimately grounded in expertise, that is *expert power*, and so forth. In other words, a part of one's total power may be reward power, another part may be coercive power, etc. But reward/coercive/expert/etc. *power* is not the same as the reward/coercive/expert/etc. power *base* from which the corresponding power is derived. Contrast the precision of these distinctions, unfortunately necessary, with Torelli and Shavitt's commensurate ambiguity; 2010, p. 720.)

Then there are those who define power as including *only* the resource side, viz. "the ability to control resources" (Anderson & Berdahl, 2002, p. 1362; Dubois et al., 2015, p. 3; Galinsky et al., 2003, p. 454; Magee & Galinsky, 2008, p. 361; Maner & Mead, 2010, p. 482; Rucker et al., 2012, pp. 353–354). This approach, of course, deviates even further from the construct's established, longingrained understanding. Ironically again, these sources describe power in a way that is essentially identical to the power *base* concept: "control resources ... to influence and control the behavior of others" (Galinsky et al., 2003, p. 454); "resources used ... to change the beliefs, attitudes, or behaviors of others" (Anderson & Berdahl, 2002, p. 1363). (Another detail note: Although power is commonly represented as capability to alter another's behavior, "behavior" is sometimes interpreted broadly in this area of social science as also signifying cognition and affect. Again, this is just a shorthand custom done for convenience of expression.)

And then others reasonably understand power's essence as "capacity to modify others' states" but incorrectly restrict its source mechanism to "providing or withholding resources or administering punishments" (Keltner et al., 2003, p. 265; Torelli & Shavitt, 2010, p. 703), even though several other means have been identified and recognized since French and Raven (1959). This practice is a particularly unnecessary misdefinition.

The upshot of this scrutiny and corrected conceptualization, i.e., distinguishing power from power base, is to establish that the neo-definition of power exposed and challenged here literally mixes two constructs, only one of which is genuine power as traditionally defined. The alternative resource/behavior proto-construct is cobbled together from diverse concepts. As a result, operationalization may be problematic, and any empirical work and derived theory resulting from this contrived definition of power is likely ambiguous. Obviously, this creates a serious problem for science in the power sub-field—all because there is hardly any way of knowing what the respective phenomenal limits are (for the resource and behavior components), based on the compound construct, if operationalization would adhere to the joint definition. That approach would be a naïve and archetypal violation of the age-old research proscription against the ambiguity of a double-barreled question (Bloch, 2004, p. 172; Churchill, 1987, p. 296). In effect, such a merged variable is not precisely defined.

But why not create a variable that is a more generalized composite of control over both people and resources? Perhaps (1) simply because of the difficult implications of a commingled compound that conflates very different phenomena. There are purposes for which such polythetic definitions, i.e., those spanning multiple categories of phenomena as opposed to a homogeneous construct, can be useful. Some formative indices or multidimensional scales might qualify. But when dealing with the most fundamental conceptual level, as with the rudimentary element of power, purity in the sense of categorical homogeneity is helpful as a starting point or classificatory building block (Bailey, 1973, p. 22; Hunt, 1991, p. 178), and violations can be treacherous for measurement and interpretation (Bagozzi, 1980, pp. 125–126). For the already confusing power construct, simpler is better.

Exactly what does the manufactured, compound variable, "resource + behavior," represent, and why? Is not more conceptual precision generally desirable? This quandary of artificially entangling diverse phenomena is the main reason the "double-barrel"-type variable is usually shunned in social science. Even Thibaut and Kelley (1959), often cited as progenitors in this new stream of



literature, clearly delineate the inanimate/resource and animate/behavior domains (pp. 102–103). Somewhat anomalously, Schwartz et al. (2012), among those who espouse the insurgent resource-inclusive variant (p. 664), empirically distinguish traditional social power and the contrarian resource conception as separate constructs (pp. 674–676). Perhaps a legitimate function could be found for a hybrid vehicle that confounds "power" over resources and power over human behavior but, in opposition, there is a very clear purpose for the behavior-only power concept—or it would not have gained status as one of the main interests of social science.

- (2) Such a plural conceptual concoction also would rightfully require considerable analytical justification, a contribution that has not been provided in the literature. Unless this contrary case is made, the traditional power interpretation would dominate a prospective dual-factor construct by walk-over (as well as squatter's rights), especially in view of the old version's demonstrated utility.
- (3) The invented, jerry-built construct, whether legitimate or not, should not be named "power" because of the potential for confusion with the widely understood contrary meaning, and it certainly should not be called "social power." In social science, after all, "power" is understood to be social power, which accordingly has meant the power over behavior. The mixed construct (resource/behavior control) is clearly not social power per either extant convention or inherent meaning, although study authors occasionally declare that they do intend social power as the focal construct even while committing the conceptual violation described (Dubois et al., 2015, p. 12; Galinsky et al., 2003, p. 454; Rucker et al., 2012, pp. 356–358, 2014, p. 382). This cluster-contradiction appears to be an intractable semantic dilemma. Alternatively viewed, of the two readily available labels, neither fits.

So, even for practical reasons apart from the analytic arguments, the neo-definers would not be able to sidestep the issue merely by claiming to define a broader construct including resource control, as opposed to the traditional social power notion, in part because, by both self-declaration and the *social* science context, social power is a normal default understanding. For the broader, joint construct they seem to cultivate, a new term would have to be coined. "Combo power," "double power," and "super power" are still available for the purpose, apparently—if there would be powerful demand in the scholarly market for an overlapping construct and designation. The field will decide if it really needs this. In fact, a resource-based power definition has been criticized since even before the cited research stream was launched (Aiken and Mott 1970, pp. 193–194; Burt, 1977, p. 3; Wrong, 1968, p. 680).

- (4) Could such a composite of resource and behavior control not be a realistic and productive measure of social power nonetheless because resource control, née *power base*, has been used as a power proxy historically (though rarely; e.g., Guilhaus, 1980)? This two-factor measure would thus embody a direct social power element and also a proxy by way of underlying resource control. Yet a possible fatal flaw with this rationalization is that traditionally understood power-base resources are narrowly defined as those that explicitly underlie and lead to accession to power—e.g., reward, punishment, expertise, etc.—while the resources described in the neo-measures reviewed here are more generalized. This distinction moves the prospective composite concept and operationalization, i.e., control over resources in addition to people, further from, not closer to, the basic conception of social power.
- (5) Finally, a new and different definition of power, or most anything else, muddles theory. There is scant reason to believe that many of the empirical results of the past 20–25 years as reviewed here connect to the main body of power theory constructed over prior decades, except by accident. A collection of variables all labeled "power" are measured, but they may or may not be the same animal as previous empirical incarnations of the construct, largely because the constitutive definition of power has become fluid. This imbroglio is the predictable product of grossly violating the cardinal semantic principles received from Rudner, Lewis, Erickson, Chase, Lundberg, Eubank,



Sloviter, and others reported at the outset of the paper. In sum, to produce a coherent body of science, we need consistent definition.

A fair question at this point: Are we getting lost in the weeds of obsessive navel-gazing about how much power can dance on the head of a pin—perhaps while setting a record for number of mixed metaphors per line of text? To the contrary, philosophy of science would retort that air-tight definition is so crucial to the theoretical and scientific process that we have no choice but to try to disentangle and delineate when faced with the kind of definitional dereliction outlined in the preceding. If not for the recent mistreatment of a vital construct, we would not even be at this juncture. At least the discussion thus far should establish the gravity and subtlety of the conceptual turmoil now surrounding social power, whether previously recognized or not—in fact, whether previously occurring or not.

3. An Implication: Measurement/Operationalization

The newly amorphous definitional landscape does present complications for power measurement, even in terms of the creation of experimental primes and manipulation checks as employed in recent power research. Operational definition should follow from a constitutive (conceptual) definition (Torgerson, 1958, pp. 1–11), so when the constitutive definition is ethereal or protean, a corresponding operational measure is very likely affected adversely. To illustrate the issue of operational ambiguity, or worse, stemming from conceptual misconstrual of power, we can inspect some of the measures and manipulations reported in Appendix Exhibit 1.

Exemplary of the issue is the Rucker et al. (2011) project, in which power is first defined more broadly than its (formerly) customary meaning to allow inclusion of resource control, explicitly "control over other people or valued resources." This conceptual expansion could have underlain the operationalization of a text-based experimental manipulation in an ambiguous way that corresponds. That is, subjects can misconstrue "felt powerless"/"felt powerful" (p. 1026) as including resource control the same as researchers can. Or, might the layman subject interpret as applying *only* to resource control? This again is reification of the double-barrel error referenced above. (A manipulation check employing a question about how much power was "felt" suffers the same problem, is merely a reliability demonstration, in effect, rather than validity evidence per se, and therefore does not help much.) And if this conceptual and operational reworking of the power construct is intentional by the authors, it should have been acknowledged.

Roughly parallel appraisal applies to Dubois et al. (2010, p. 201), Gal (2012, p. 1024), and Magee et al. (2007, p. 207), this time with a manipulation asking for subject retrospective on when s/he "either had or lacked power." Are resource control, behavior control, or both the definite referent? We cannot know. Then, Dubois et al. (2015) and Jiang et al. (2014) deviate further from the traditional power definition by delimiting to only resource control, excluding behavioral control: "control over valued resources in social relations." (Tacking on the term "social relations" does not ameliorate. One can retrieve, or experience, resource control without control over human behavior in social relations. For instance, Western nations punish Russia and Iran with material sanctions and those two countries still do not behave as sanctioners intend.) Again, the ambiguous "felt powerless ... powerful" priming manipulation (e.g., Jiang et al., 2014, p. 186) is employed in several experiments. Also, see Dubois et al. (2012, p. 1049) for the same resource-based definition and a power priming manipulation limited to "we all feel powerless (powerful) in the morning" (p. 1052). Power relative to resources, people, or both, one must ask. Perhaps that uncertainty afflicts subjects as well as scholars—aside from the issue of whether retrospective perception of power is equivalent to the reality of the construct (Bacharach & Lawler, 1976, pp. 123–124).

The foregoing problems also are endemic to the similar Rucker et al. (2012) work. There, again, power is conceptually defined as *only* resource control (pp. 353–354). Exhibit 1 summarizes these definitional issues, and even highlights research that has defined power conceptually in the traditional way advocated here, but still encounters evident operational weakness. Vice versa



cases are also found, i.e., those that commit the definitional violation but arrive at unobjectionable operationalization or manipulation compatible with the social control construct (e.g., Anderson & Berdahl, 2002, p. 1366; Dubois et al., 2010, p. 201, experiment 3; 2015, p. 10; Galinsky et al., 2003, p. 455; Gruenfeld et al., 2008, p. 113; Guinote, 2008, p. 240; Magee et al., 2007, p. 205; Rucker et al., 2011, p. 1024, 2014, p. 387).

Among the studies with good definition and deviant operationalization, a different but typical problem involves episodic priming text for the so-called low-power condition. Directing subjects to recall when "someone else had power over them," as used in Anderson and Galinsky (2006, p. 517), Briñol et al. (2007, p. 1043), and Jin et al. (2014, p. 827), is problematic, conflating one's low power with another's high power. When actor X has power over actor Y, it does not necessarily mean that Y does not have power over X, or anyone else. There is such a thing as high reciprocal power resulting from mutual dependence (French & Raven, 1959, p. 261; Thibaut & Kelley, 1959, p. 107). Due to a resource balance that gives rise to X's power over Y, that power may indeed correspond with low power for Y, but not necessarily. So this exposition renders such naïve text-based manipulations of very questionable validity, despite any simplistic manipulation checks of comparable style, e.g., "felt powerful on a 7-point scale," as are regularly found in this literature stream (Jin et al., 2014, p. 822).² Of course, less of an anomaly are works that deviate on both conceptual and operational treatment in the ways just described (Dubois et al., 2010, p. 201, 2012, p. 1051; Galinsky et al., 2008, p. 1460, 2003, p. 457; Gruenfeld et al., 2008, pp. 114–115; Guinote, 2008, pp. 245–247; Rucker & Galinsky, 2008, p. 260; Smith & Trope, 2006, p. 581).

3.1 Another Conceptual and Operational Issue: Power vs. Perceived Power

Occasionally in the nouveau power literature, but more rarely in the classic period, power is proffered as primarily a psychological construct (Fast et al., 2009; Galinsky et al., 2006, 2003, p. 454; Garbinsky et al., 2014, p. 611; Lammers et al., 2013; Rucker & Galinsky, 2008, p. 258; Rucker et al., 2014, p. 382; Smith & Trope, 2006, p. 580). If only that were so. Much of the cited literature does focus operationally on perception of power, relying on crude self-report of one's own and other's power, although it is recognized that authentic power and its perception can very well diverge (Rucker et al., 2012, pp. 355–356).

Without question, perception by the power target can contribute to power's reality, perhaps predominantly in some instances. The power bases themselves, which can largely if not totally determine the amount of power that is present in a relationship, may be perceptually connected. Then one's perception of another's power, even if initially false, could be self-fulfilling via inducement of acquiescence. So there clearly is a perceptual aspect of power.

Yet perceived power is not power—or there might have been no need to invent the term "perceived power" in the first place. The perception, as acknowledged, can be erroneous (Rucker et al., 2012, p. 356), so the perception is generally a very imperfect representation of the power construct. Moreover, epistemologically, this literature features abundant self-referencing to justify the perceived power measurement approach (Anderson & Galinsky, 2006, p. 514; Dubois et al., 2010, p. 199, 2012, p. 1051, 2015, pp. 2–3; Galinsky et al., 2003, p. 463, 2006, pp. 1068–1069, 2008, p. 1453; Gruenfeld et al., 2008, p. 112; Magee et al., 2007, p. 201; Rucker & Galinsky, 2008, p. 260; Rucker et al., 2011, pp. 1016, 1018, 2012, p. 355, 2014, p. 385) as well as other methods, so the common root of the theoretical and methodological family tree reveals it as inbred to a large degree.

In fairness, much of the cited research aims to examine psychological and behavioral outcomes of holding and perceiving power, mainly the psychology surrounding power, in the special case in which power is also self-perceived. So, the perception itself is intended to embody the psychological state of the power holder—who often may have a reasonably accurate understanding of the amount of power held. Fair enough. As such, however, the construct measured or manipulated is not truly power except when the perception is perfectly accurate, but instead a (possibly rough)



surrogate for it, and should not be called "power" by authors. The somewhat narrow and specialized purpose of this research tributary, addressing the psychology attendant to power rather than power relations per se, is no less legitimate, but is more of an oblique offshoot of research genuinely pertaining to power. This could be considered a truth-in-labeling issue.

3.2 Methodological Corollary

As alluded to earlier, a high proportion of these contemporary power-related studies, many of which may really be examining no more than perceived power, rely heavily on experimental priming to induce *feelings* of having power. Examples of the priming language and sources are:

"Please recall a particular incident in which you had power over another individual" (Anderson & Galinsky, 2006, p. 517; Briñol et al., 2007, p. 1047; Dubois et al., 2010, p. 201; 2012, p. 1051; 2015, p. 9; Galinsky et al., 2008, pp. 1453–1454; 2003, p. 458; Gruenfeld et al., 2008, p. 114; Magee et al., 2007, p. 203; Rucker & Galinsky, 2008, p. 260; Rucker and Galinsky 2009, p. 551; Rucker et al., 2011, p. 1018; Rucker, Hu, and Galinsky 2014, p. 385). "We all feel powerless (powerful) in the morning" (Dubois et al., 2012, p. 1052). "Remember a time you felt powerless (powerful)?" (Jiang et al., 2014, p. 186; Rucker et al., 2011, p. 1026, 2012, p. 363). "When did you feel powerful (powerless)? Please, recall your past experience How did you feel?" (Kim & McGill, 2011, p. 97).

Priming clearly has a useful role and history in certain types of investigations with particular types of variables. Constructs—typically traits, stereotypes, and goals—are primed (i.e., mentally activated) almost universally through such stimuli as events, actions, information, verbiage, objects (Molden, 2014, p. 5), images, tasks (Fujita & Trope, 2014, p. 71; Wheeler et al., 2014, p. 114), or other sensory cues (Lakens, 2014, p. 175).

The power construct, on the other hand, is inherently of a different nature. Inducing feelings via priming may be a well-founded and effectual mode of manipulating related cognitive and affective variables, but may not be appropriate for an abstract, relational *potentiality* such as social power, which may or may not be perceived by power holder or target. Again, if recognized generally throughout the literature that the true construct involved is power "feeling" or power perception, this inconsistency is only a venial offense, not a mortal sin. Still, the variable should not be represented as power, as it usually has been, but rather a part of power's possibly derived psychology. There is some evidence that simply reflecting on a state *can* induce the state's cognitive structure (Bargh et al., 1996; Prinz, 1997), comparable to so-called "mind-set priming" (Gollwitzer et al., 1990), but natural, objective manipulations are held to be more valid primes than mere verbal material (Chen et al., 2001, p. 178).

Also, a traditional practice has been to introduce primes unobtrusively, even subliminally. In contrast, the primes found in the "power" line of research cited are almost all very overt, such as those shown. Taking this liberty could weaken the viability of an induction. In an entire comprehensive anthology on social priming (Molden, 2014), few if any of the countless examples even resemble the types of priming devices reported here from the social psychology literature. Overall, specifically, traditional priming stimuli feature these hallmarks:

•subtle presentation (Doyen et al., 2014, p. 21; Fujita & Trope, 2014, p. 70; Newell & Shanks, 2014, p. 93), ostensibly incidental and unrelated to subsequent associated responses (Fujita & Trope, 2014, p. 73; Higgins & Eitam, 2014, p. 238; Molden, 2014, p. 5; Wentura & Rothermund, 2014, p. 50); not as effective when blatant (Loersch & Payne, 2014, p. 146);

•commonly (though not universally) assumed subliminality to enhance unconscious automaticity (Doyen et al., 2014, pp. 14, 22–23) and inhibit demand effects (Doyen et al., 2014, pp. 23, 30; Wheeler et al., 2014, p. 118);



•content mistakenly attributed to one's internal thoughts (Loersch & Payne, 2014, pp. 144–145) for effect enhancement;

•generally not self-induced or intentional, again to avert demand-effect distortions (Förster & Liberman, 2007; Higgins & Eitam, 2014, pp. 245, 247; Molden, 2014, p. 253).

Because of the overtness of most of their manipulations, the power priming techniques summarized herein are clearly at odds with, at the other end of the spectrum from, this prescriptive profile. As customary priming methods in this neo-power area seem to be somewhat unorthodox with respect to mainstream priming in social psychology, the quality of reported results may be called into question. Really, a bit of power's collateral psychology is primed and we are supposed to believe that it is tantamount to power? Stating the previously unspeakable, there could even be a world of difference between the power psychology summoned by a contrived laboratory prime and that resulting from real power, despite any minimalist manipulation checks.

Another natural question is this: Why resort to such unconventional priming devices at all? Or might it have something to do with the opaque and impenetrable character of social power itself? Actually, given the daunting challenge of pinning down such a recalcitrant construct, the indirect measurement approach via power psychology may be considered tactically clever, even a good try. But it also is becoming apparent that much of the nouveau "power" literature may have little to do with power.

4. Other Definitional Issues with Operational Overtones

One practical rule of definition is that elemental terms be primitive or definite, so to speak, i.e., either self-evident or axiomatic in the sense of containing unambiguous, established meaning more basic than the nomenclature being defined (Barker, 1965, pp. 200-201; Hunt, 1991, p. 154; Oesterle, 1963, p. 67). The operative power definition in the cited nouveau literature does not qualify on this score because of habitual use of an ambiguous term, "control" (e.g., Dubois et al., 2010, p. 199; 2012, p. 1048; Galinsky et al., 2008, p. 1451; Guinote, 2008, p. 238; Rucker et al., 2011, p. 1016; Rucker & Galinsky, 2008, p. 258, 2009, p. 549; Rucker et al., 2012, pp. 353-354). Not only as erratically used in behavioral science (as opposed to the relatively consistent former usage of "power") but even according to prominent dictionary definitions, the word "control" can mean either power itself per the accepted, traditional definition—that is, the capacity or ability to impose change—or exercised power, i.e., actually enacting that change (Britannica World Language Dictionary 1959, pp. 201-231); French & Raven, 1959, p. 260). These are two very different constructs. (The term "influence" suffers from the same ambiguity; Dahl, 1963, p. 40; Simon, 1953, p. 501.) Contrast this nebulosity with the straightforward and primitive "ability to get someone to do something," a shortcoming that undercuts recognized definitional objectives such as non-ambiguity and clarity (Hunt, 1991, p. 36).³

And if dictionary creators can think of different constructs when they use the word "control," so might behavioral scientists or even their experimental subjects as they are being primed. If a conceptual definition is, at most, partly power, while permitting other constructs such as power base or exercised power to intrude, a derived power measure such as those shown in the exhibit may have the same failing—i.e., maybe power, maybe not, maybe in-between—thereby rendering empirical results equivocal and hollow. It is also intolerably circular to define power with an ostensibly primitive term, in this case *control*, that sometimes means the same as the definiendum. Projects incorporating this conceptual-turned-operational problem include Dubois et al. (2010, 2012, 2015), Gruenfeld et al. (2008), Guinote (2008), Jiang et al. (2014), Jin et al. (2014), Magee et al. (2007), Rucker et al. (2011), Rucker and Galinsky (2008), Rucker et al. (2012), Rucker et al. (2014), and Smith and Trope (2006), among others. It is possible, therefore, that a substantial fraction of empirical findings and corresponding theory in this area are compromised.



There are other widely accepted rules of definition. One source nominates the criteria of inclusivity (of the substantive genus), exclusivity and differentiability (with respect to other constructs to isolate the *species* level), communicability, consistency, and parsimony (Hunt, 1991, pp. 36–37). Obviously, some of these norms are inescapably subjective and therefore of limited value in context, such as inclusivity/exclusivity which would be largely in the eye of the beholder. But by including disparate and dissimilar phenomena, as we have seen—e.g., resources, exercised power—the focal *du jour* "power" definition would appear to violate any reasonable exclusivity standard in the extreme and fails to differentiate from other concepts (Oesterle, 1963, pp. 64–65).

Other standards among those listed, however, can be more productively applied in this setting, notably the contested definition's shortfall on consistency and clarity, as mentioned, due to ambiguous and equivocal terms. The propagation of this new literature stream, as confirmable from references and citations, does suggest good communicability; it is just a matter of whether the correct content is being communicated.

Overall, the emergent portrait is of loose conceptual definition which can easily give rise to operationalization that similarly and improperly allows divergent phenomena within a particular term's categorical rubric. As a result, measures or manipulations, such as priming language incorporating the word "control" or even "power" as so defined, could mean resource access, actual alteration of human behavior (long known as exercised power), or traditionally understood power itself. Therefore, we cannot know for sure what the results of such research really mean because the cornerstone variable cannot be accurately identified. For example, can we be sure about the finding that low power induces choice of larger products (Dubois et al., 2012, p. 1051) and willingness to pay for status products (Rucker & Galinsky, 2008, p. 261; Rucker et al., 2012, p. 363), or was the true antecedent some other variable such as perceived power or resource "control"? Of slightly larger gravity, what real confidence can be ascribed to prominent findings on sexual harassment (Bargh et al., 1995), basic ethicality (Dubois et al., 2015), the Western literary canon (Keltner & Robinson, 1997), or attitudes toward human exploration of Mars (Weick & Guinote, 2008)?

This is not to suggest that definitions must forever be immutable. Sometimes knowledge advances require definitional revision, as with the astronomy profession's re-definition of planet. Nevertheless, if one (or a whole scholarly fraternity) presumes to override an established definition, there had better be solid, cogent justification for that drastic action. This necessary element appears to be absent from the new power literature. Those cited here and a few fellow travelers (e.g., Keltner et al., 2003; Schwartz et al., 2012) have not deigned to make that comparative case. Their permissive usage of a heterodox definition amounts to the lexicographic analog of unsupported assertion in argumentation—in effect, a forfeit. With apologies to author Lewis Carroll, it is the Humpty Dumpty approach to power definition: "When I use a word, it means just what I choose it to mean" (Gray, 1971, p. 163). Just because someone, somewhere declaims that power is not a strictly social relation does not make it so, does not make it a coherent construct, and does not mean such an interpretation must be saluted. This elaborated perspective merely adds weight to the argument for definitional consistency as a research/theory precondition.

The field of linguistics, unfortunately, has no bright-line rule for when a rival meaning for a word is allowed to supplant an established one (Mair, 2006, pp. 3, 19, 39–40), but even the reality of widespread nonstandard use of an expression does not mean that scholars must surrender to it. Science must never ratify the unsupported, let alone the incorrect. Etymology should be respected, or at least not ignored. Galinsky et al. (2003, p. 454) and Rucker and Galinsky (2008, p. 258) do acknowledge the classic power definition and offer a fair justification for the study of resource "control." Yet an argument for superseding a previous definition, or overlaying it with this additional construct, is not found. Barker (1965, p. 202) warns about the arbitrary substitution of new definitions for established ones. The danger is a slippery semantic slope into the realm of Tower of Babel confusion. For direction, perhaps scholars should occasionally have the humility to consult



an everyday dictionary—often a reasonable starting point. If done in this case, it would have been discovered that primary dictionary definitions are very consistent with the original behavioral science conception of power (maybe no coincidence) and have little to do with the resource control construct (Britannica World Language Dictionary 1959, pp. 201-231); Dictionary.com, 2015). Some of the new-generation authors in this area cite the classic power understanding, such as French and Raven's (1959), but largely ignore it thereafter in favor of one that has been an acknowledged outlier all along (Thibaut & Kelley, 1959, p. 101).

Not that a natural language system is or could be a perfect substitute for the aspiring formal language system of social scientific lexicon, but the careless abandonment of decades or more of accepted usage naturally leads to epidemic confusion. When linguistic confusion infects the research process, the outcome is an intertwined mélange of conceptual misunderstanding, mismeasurement, and theoretical weakness. Without the foundational ingredient of clear definition, it can hardly be otherwise, and this is why definitional fidelity is vital in science.

Prototype illustrations of the empirical threat are available. Dubois et al. (2012, p. 1051) contribute the noteworthy finding that power is inversely related to the size of smoothie selected—but power was manipulated by retrospective recall of perceived power, which admittedly can diverge from actual power (Garbinsky et al., 2014, p. 611). And the low-power condition could have been confounded with high other power ("recall ... someone else had power over you") which can coexist mutually with high self-power (French & Raven, 1959, p. 261). The same issues apply to the Rucker and Galinsky (2008) finding that power is inversely related to willingness to pay for highstatus products (cf. Rucker et al., 2012, targeting the chocolate and pizza parlor categories), among others. Likewise with respect to the Galinsky et al. (2003, p. 458) neo-classic conclusion that power induces subject action tendency against an annoying room fan. Because of operational divergence from a standard definition, along with inherent ambiguity, meager confidence can be attached to these reported results. Instead of a high-low power construct, a hybrid other-self dimension may be the true independent variable (with high power common to both categories). Therefore, what do the findings really mean in terms of the nominal power construct, and do they even connect to established power theory? (Much of the broader and voluminous social science literature on the constellation of constructs orbiting power—purpose, values, themes, culture, status, roles, etc., e.g., Fiske, 1993; Keltner et al., 2003; Schwartz et al., 2012; Torelli & Shavitt, 2010—may be well and good, but is not directly relevant to this discussion on power's definitional baggage. The crux is a current fad or trendy quirk of definition and its implications for operationalization and theory in the social and consumer psychology context in particular.)

Then, another complication intrudes on studies priming with simply a general question about power recall, without specifying the *social* power aspect, that is, power over another individual or group. Again, this lacuna allows opportunity for subjects to mirror researcher interpretation of power as resource-oriented rather than a social-behavioral construct, thereby deviating from widespread and traditional understanding—which becomes less widespread while dueling definitions prevail. Dubois et al. (2012, p. 1052; 2015, p. 9), Rucker et al. (2011, p. 1026), Rucker et al. (2012, p. 363), and Weick and Guinote (2008, p. 965) are examples of this tendency. The researchers are excavating many significant empirical relations between dependent variables and *something*. We just cannot have high confidence that the thing is social power.

To encapsulate, the foregoing evidentiary brief is presented to suggest that the case for a new power definition, operational or otherwise, is less than compelling, and that the consequences of such anti-scientific lassitude could be severe. There is more.

5. On Validation

Ordinarily, objective variables such as experimental manipulations, including primes, are not subject to validity testing per se. But when the manipulation is used as proxy for an unobservable construct such as power, construct validation methods may still be germane.



What of manipulation checks as validation evidence? The entire body of research examined here demonstrates conventional, even diligent, manipulation checks to confirm the intended power primes employed. Naturally, studies that achieve publication also report successful manipulation checks with significant results. As referenced previously, however, the variable used for this purpose is almost uniformly a self-report measure reducible to *perceived* power. Established through this process, therefore, is that the priming manipulations succeed in manipulating some variable—maybe power, possibly perceived power or power-related resources, perhaps something else. Strength of the manipulation check results indicates efficacious manipulation, but of which contending construct we cannot be sure. The tests, as suggested earlier, are more a variety of reliability testing, a form of proto-validation. (Out of 145 reviewed studies, 58 employed manipulation checks. Only 11 of those used coder-judges instead of subject perceptions alone.)

All of this signifies, once again, the disharmony between method and the nature of power. Normally with priming manipulation checks, the manipulated variable itself (typically cognition or affect) is perceptible and retrievable, or at least knowable, by the subject. This is not necessarily so with power. Power is neither pure cognition nor affect; it is a property of a social relation, often opaque to participants—alternatively a potential outcome of the relation. So, there is extra thickness to the wall of resistance between the key variable, power, and its validation in this line of research. This could prove to be a fatal flaw in the dominant methodology of the whole research area.

In addition, although researchers go to great lengths to mitigate the possibility of demand effects, that evident threat to validity should not be underestimated. Simply, a plausible subject reaction to some popular priming devices could be, "These mad scientists in lab coats want me to reflect about a power situation? This gig must have something to do with power! Maybe I'll just surprise them with some weird answers they're not expecting. What fun." With more overt manipulations, contrary to priming traditions, this type of problem looms larger.

5.1. Criterion Validity?

The aggregate profile of significant substantive results emerging from this literature body could reasonably be put forth as evidence of criterion or pragmatic validity. In other words, contemporary power researchers have delivered findings of numerous empirical linkages between the "power" variable and others. Most of the results make analytic sense, so the nominally central variable relates to a system of other constructs in expected ways—literally embedded in a nomological network. Hence, criterion or even nomological validity can be supported.

To a limited degree, that is. Unfortunately, the same would be true of an infinite number of other variables, including even several power-related constructs. The portfolio of results makes some sense for power base, exercised power, and perceived power the same as for power itself. So, the body of evidence amounts to modest criterion validity for power as operationalized, or a number of other prospective construct measures. As with any construct validation exercise, such evidence is a point in favor of the focal operationalization's validity, but not conclusive—particularly so in this case because of other power-related pretenders in nearby conceptual space.

5.2. Empirical Supplement: Meta-Analysis

In contemplating meta-analytic treatment of the summarized findings of this research stream, a reasonable question would be this: Why bother, especially in view of erratic operationalization brought about by chronic misdefinition—apart from the issue of whether those conceptual definitions themselves are objectively incoherent and dysfunctional—all leading to results which, in many cases, may not mean what they appear to mean? However, one dimension of this body of work might be amenable to meta-analytic insight. It would be of interest to discern the pattern of results associated with the different approaches to conceptual and operational definition, i.e., to see if results differ by semantic or methodological category. This information could then contribute to criterion or nomological validation of the categories and, by extension, the original premise of



efficacious definition. Specifically, might the research based on non-deviant definition or operationalization produce stronger results? Or, if the nouveau approach to defining and operationalizing power has more merit than traditional methods, it should produce stronger results across the range of variables that expert author-researchers expect to relate to power (reflecting the very concept of criterion validity). Also, could different types of measure, prime, or manipulation, such as straight recall, hypothetical scenario, or objective position, produce different results?

Exhibit 1 displays the aggregated strength of results classified by status of conceptual definition and operationalization. The selection of studies, representing a large fraction of the genre, is technically a sample but approximates a population. It is the population of empirical power articles from the relevant upper-tier literature segment where such work is placed (since the neo-definition trend began in the latter 20th century, principally APA- and SPSP-sponsored or affiliated *Journal of Personality and Social Psychology, Personality and Social Psychology Bulletin*, and *Journal of Consumer Research*), augmented by selection of the most complementary studies that embody similar methods and theoretical subject matter, as confirmed by volume of cited references in the targeted journals. That is, along with the top-tier literature, the other works most frequently cited in the reviewed *JPSP/PSPB/JCR* articles were comprised. [Garbinsky et al. (2014) are not included in the set because they did not quite go so far as to over-label their power perception variable as "power." Likewise, Torelli and Shavitt (2010) operationalize power-related beliefs and "concepts," not power itself, and Lammers et al. (2013) explicitly examine retrospective "feelings" of power—though discretionarily labeling it "power" at times.] This process ultimately generated a publication date range for selected works of 1994–2016 inclusive.

Produced therefore is a population from leading sources supplemented by the population of related items from similar literature most referenced by the first set. (Content from the APA-sponsored *Journal of Consumer Psychology* may also be considered part of the core population domain since only one relevant article has appeared there, and is included.) Others might arrive at a slightly different assemblage of the latter group, but the pattern of citations in the *JPSP/PSPB/etc.* segment itself seems to concur and indirectly endorse the choice method. The strict standards for high-tier publication establish a worthy universe for investigation, it is submitted—there usually are reasons why unpublished studies are unpublished—and coverage of such a large proportion of topical work suggests a chance for robust results. [A sizable detachment of the selected set also qualifies as consumer psychology (58 of 145 studies, but not the same 58 as referred to in the preceding section), so the findings inform that particular literature as well as broader social psychology. Studies of that type are so indicated in the exhibit. Results for that literature subset alone, very similar to what is reported here, are available upon request.]

Fortunately, also, the convenient similarity of approach and methods throughout, including many common research issues and variables, nearly universal use of experimental design, comparable analytic tests, conventional sample size ($20 \le n \le 360$ except for one survey-design outlier) and sampling procedure (student subjects in 113 of 145 total studies), and even much overlapping authorship, tempers potential concern over some biasing threats. In other words, there is less plausible reason to fear systematic variance, whether method or circumstantial, across Exhibit 1 cells.

Neither would publication bias appear to be a disqualifying issue in a comparative analysis. Such bias should affect all exhibit categories, without reason to expect any affected more than others. Addressed is which definitional approach works better, rather than an absolute appraisal of coefficients.

Represented in the exhibit are two variables: proportion of statistically significant findings (among those hypothesized by researcher/authors to be significant across their 145 studies) and median significance level, by category of definitional practice. (With many published significance levels naturally expressed as "less than" or "less than or equal to," thereby ordinalizing the data,



computing arithmetic mean was not feasible. Also, presenting effect sizes may not be appropriate because results involve a variety of statistics, i.e., correlation and regression coefficients among others, not only between-group differences. Even if converting to d-values is possible, this appears to be the type of case in which that procedure is not universally accepted; Borenstein et al., 2009, p. 46.) What we find is little pattern associated with median significance (p-values), but interpretable results for significance proportion (also distilled into Table 1). The top five proportions (\geq .764) come from categories of studies whose operationalizations are not found to deviate from the traditional definition of power (either conforming or ambiguous). Two of the top three (\geq .844) also are associated with adherence to that conceptual definition, and none of the top four (\geq .818) explicitly deviate.

The poorest-performing categories of studies in terms of proportion of results significant (.722, .731), and three of the bottom four (\leq .757), are those that have non-conforming operationalizations, whether adhering to the conceptual definition or not. The worst performer of the lot on this metric violates both conceptual and operational definitions of power. The only statistically significant inter-group differences among these Table 1 findings tend to separate the top three joint categories from the rest, empirically endorsing conformity to the classic power definition, as two of three are consistent with either conceptual or operational, respectively (i.e., +/0/+ or 0/+/+ in the two definition columns), and one group (#3) is consistent with both.

Overall, therefore, the traditional power definition and operationalizations derived from it tend to evince better criterion validity than the newer approach. Of course, as with any validation testing, if the hypothesized linkages are wrong, the validation results mean just the opposite, but we defer to the cited authors on this background. (As an anonymous reviewer observes, researchers with the wisdom to use a good definition might also tend to have discernment in selecting empirical variables. Consequently, we cannot rule out the possibility of such a bias inflating results.)

Table 1. Meta-analysis summary: Metrics for each category of definitional approach					
	Conceptual ^a	Operational ^a	Proportion significant	Median <i>p</i> -value	
1.	+	-0-	.929 ^{b, e}	.05	
2.	-0-	+	.866 ^{c, e}	.04	
3.	+	+	.844 ^{d, e}	.05	
4.	-0-	-0-	.818	.03	
5.	_	+	.764	.02	
6.	-0-	_	.757	.04	
7.	_	-0-	.753	.03	
8.	+	_	.731	.04	
9.	_	_	.722	.03	

^aLegend: "+" indicates conformity to traditional power definition; "-" indicates deviation from traditional definition; "-0-" indicates ambiguous or absent. For example, category #1 (indicating the first-ranked based on proportion of cases significant) includes all studies using the traditional conceptual definition of power but an ambiguous operational definition. Category #2 includes ambiguous (or absent) conceptual definition, but an operational definition that conforms to the traditional power conception, etc. (Associated proportions are relative to all studies in the category.)

^bSignificantly greater than proportion entries #5 (.764) through #9 (.722) at 0.05 level or better (0.003 $\leq p \leq$ 0.023)

^cSignificantly greater than proportion entries #8 (.731) and #9 at 0.01 level ($p \le 0.0098$)

^dSignificantly greater than proportion entry #9 at better than 0.05 level (p = 0.026)

^eCategories #1-3 were each compared with categories #4-9, and #4 with #5-9, amounting to 23 between-group tests, eight of which yielded significant differences as identified. Retrospectively and atheoretically, when the other 13 of all possible 36 comparative tests were done, no other significant differences resulted.



Table 2. Meta-analysis summary: Metrics for each category of substantive operationalization approach

Method	Proportion significant	Median <i>p</i> -value	
Self-report (n = 417)	.753	.03	
Objective manipulation ($n = 374$)	.785	.02	
Verbal prime (n = 193)	.750	.05	

Note: Reported sample sizes (n) represent number of power-related coefficients for each category of the 145 studies, a total of 984 coefficients.

Indeed, despite the simplism of the meta-analysis, it is the study authors themselves who set the terms of validation. It is their hypotheses that determine which variables are offered as logically relating to the "power" measures (a total of 984 linkages over the 145 studies), and therefore are a sensible set of standards for criterion validity testing here. In effect, the reviewed studies' own empirical results now double as metrics for those tests. Substantively, the indication seems to be that definition matters, that definition has an empirical impact.

Further analysis with validity implication. Carving the results along a different dimension, Table 2 shows success metrics per specific type of operationalization employed. This time, intercategory differences in proportions are not significant, possibly because each operational approach includes both effective and problematic devices. For example, there are self-reports and then there are self-reports—e.g., straightforward multi-item questionnaires (Anderson & Galinsky, 2006, pp. 516–517; Dubois et al., 2015, p. 16; Rucker & Galinsky, 2009, p. 551) or scenario-based questions involving the kind of imprecise confounding described earlier. Here, in fact, the former subset of the self-report category yields a significance success rate of .857 (n = 70), the latter only .732 (n = 347, not broken out in the table), with the difference significant at the 0.01 level. Although not designed as a validation test per se, this result also is consistent with natural expectation (based on the preceding critical discussion), therefore another point in favor of the *classification's* criterion validity, if not that of some underlying measures.

5.3. On Validation of this Review's Operative Perspective

A clarifying note on prospective inter-rater reliability *cum* content analysis: Conventional practice might be to demonstrate expert agreement with the classification categories embodied in this work which provide the structure to Exhibit 1, to verify the various designations—e.g., (un)faithful to traditional conceptual definition of power, operationalization (in)consistent with definition. Normally, the procedure is to recruit judges to render classificatory decisions to be compared mutually, for the purpose of testing whether author interpretation (shown in Exhibit 1) is idiosyncratic or generally acceptable. In the present effort, a sample of contemporary power scholars would seem a natural choice for the task. But that population, or a large segment of it, is in fact primarily responsible for the conditions catalogued and addressed here, and the present state of disarray. If there truly is anything close to the dubious profile alleged, then that scholarly community would be among the most disqualified from such judging service.

Who instead, then? Select from the general population of high-end scholars in social psychology or allied fields? Considering the conceptual nuances and subtleties of the power research area as described throughout and to be recounted presently, that option could be even less advantageous. Unless one has been living professionally with the labyrinthine theoretical relations among the full range of power-related constructs, the whole mosaic can appear to be inscrutable doubletalk—or even if one has, as demonstrated in the literature. Imposing the content analysis task on the non-specialist in such a sticky conceptual domain could be an impractical non-starter.

With ordinary content analysis practices apparently not viable, a market-based combination resolution is applied to dispatch the issue. First, the largest feasible set of judges actually is used,



i.e., the entire audience of readers—which implies those with at least obliquely related background and self-revealed volitional commitment to try to penetrate the conceptual morass engulfing power-related subject matter. Motivated readers, that is, or the market for information, rather than a small group of hand-picked judges, will ultimately decide if author classification is reasonable.⁵

Moreover, the author submits that much of the material offered here that is potentially subject to formal content analysis is objectively verifiable, at least for readers with appropriate scholarly background. For instance, a power definition either applies narrowly to the ability to change another's behavior, or it also allows inclusion of capacity over resources (or applies to resources only). In every case of this type found in the literature, classification should, therefore, be straightforward based on literal reading, without need for translation by content raters.

But then how could so many researchers come to, in effect, classify a non-conforming power definition into the acceptable or desirable category? Again, all those scholars are more than conversant with the plain English meaning of the words "resource" and "behavior," so it is inevitably a matter of discretionary choice to invent or subscribe to a contrary meaning, and surely not primal conceptual misunderstanding. (This covers the *how* question; addressing *why* is beyond acceptable scope because it would presume motives.)

Regardless, to go the extra mile in respect of the legitimate orthodoxy of inter-rater content analysis, a cadre of eight very senior power scholars (a fairly large fraction of those still active from what could be considered the classic period of power scholarship, but including only two of those cited), along with two new-generation scholars for good measure, was enlisted for the purpose. These 10 were augmented by three other generalists, for a total of 13 reviewer-judges. Across 12 Table 1 and Table 2 categories and 145 studies, the group produced no disagreement with the classification scheme displayed here, for whatever that modest level of assent is worth, although a conventional level by content analysis norms.

The meta-analytic results themselves also help justify the approach taken to content analysis. Even if other judges' input would produce some rearranging of the classification, it would be unlikely to reverse falsification of the implicit hypothesis about higher ranking for good definition. Since contra-traditional definition is "bringing up the rear" in the comparative standings (Table 1), rater appraisal would have to be drastically different to find that the method performs in a way that is superior.

6. Conceptual and Historical Integration

Knowledge loss is a real phenomenon. Although humanity's scientific progress and the advancement of knowledge over the millennia may seem relentless, world history also offers examples of knowledge lost. The consequences of the Roman Empire's fall and subsequent Dark Ages would be the most familiar archetype. Consider *concrete*, which became a nearly dormant technology for over 1000 years after having been perfected by ancient Rome. Or view any episode of the History Channel's "Ancient Discoveries" series.

Knowledge loss can come about through less extreme means than slaughter of knowledge-bearing populations or the sacking and arson of the library at Alexandria in 642 A.D. (or 391 A.D. or 48 B.C., depending on the source. Precise knowledge about the date seems to have been lost!) Neglect, irresponsibility, and normal forgetting—albeit simultaneously by a large collectivity—can be sufficient modes of cognitive destruction.

A close-to-home example of a less substantive type helps illustrate the tendency. Have you noticed that more and more social scientists are mispronouncing the proper name, "Likert," as in *Likert* scale? Younger readers especially may not be aware that Rensis Likert pronounced his last name with a short *i*, not a long *i*. Everyone else in the field seemed to do likewise only 20 or



30 years ago. Now, however, with the passage of more time separating us from Professor Likert, his work, and his contemporaries, knowledge of the original pronunciation is being lost among succeeding generations, and more frequently we hear the incorrect long *i* applied to the psychometrician's name.⁶

Infidelity to the long-standing definition of social power may be a manifestation of the same disorder. Or it may be a conceptual innovation—although the presentation so far has argued copiously that the innovation's time has not come because it yields more harm than benefit. Since what is essentially a meretricious neologism has been gaining momentum in our literature, the time may instead be ripe for a restorative recap of the established nomenclature of power theory. With seemingly subtle distinctions and relations among such constructs as power bases, power sources, and exercised power sources (or bases), aside from power itself and exercised power, the conventions of power-related semantics in behavioral science may appear a jumbled maze. That condition alone is sufficient reason for a timely, or overdue, clarifying reprise. The following taxonomy represents long-time mainstream conceptualization of these constructs, as slightly refined by the author (Gaski, 1987, 1988, 1992), substantively endorsed by Raven himself (1993, esp. pp. 233–235), and graphically depicted in Figure 1.

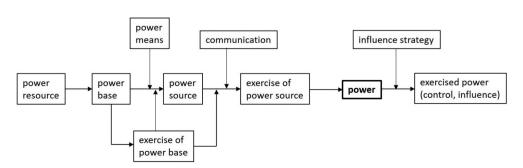
*Power base: a capacity that can underlie or ground one's power. Types include the ability to reward or punish (reward and coercive power base, respectively) or share valuable expertise (expert power base), among others, as popularized by French and Raven (1959). A distinction should be noted, though, between the capability to apply reward and punishment or impart expertise and the literal resources that give rise to the ability. Examples of such resources might be contract terms (used to punish; or more crudely, a whip, club, or cattle prod), money or an inventory of premiums (for reward), research knowledge or raw data (for expertise dispensing), and the like. Implied, therefore, is an even more primitive construct we may designate power resource that actually underlies the underlying capacity or power base! (Off to a good start in simplifying this conceptual area, are we not?)

•Power source: the power target's perception of a power base, i.e., cognition of the ability. So the base may be inert and ineffective unless perceived. (And, yes, it is possible to possess a power source without corresponding base through target misperception.)

•Power means: a communication variable, by which the power target becomes aware of the base or ability. Examples could be promise of reward, threat of punishment, or even the power target's spontaneous inference of the base's existence (Dahl, 1957, pp. 202–203). This instrument is what mediates power base into power source.

•Exercise of power base: activating or using a power base, e.g., actually granting a reward or imposing punishment. (Power base exercise can also qualify as power means, i.e., if it is the device that creates *cognizance* of the base, which itself is the power source.)

Figure 1. Essential sequence of power-related constructs.





*Exercise of power source: target's perception of power base exercise, e.g., awareness that reward or punishment has been imposed. Realistically, for this not to occur simultaneously with power base exercise could be rare, but far from inconceivable. (You assign a student a grade before the student is informed of it.) Implied is another communication mediator, converting the reality of power base exercise into its perception or power source exercise, which will remain unnamed to forestall overload.

•Power: here and elsewhere in social science, an abbreviation for social power—the ability to get another to do what would not have been done otherwise.

•Exercised power: actually getting another to do what would not have been done otherwise, or the enactment of behavioral change in another (Wrong, 1968, pp. 676–677).

•Control or influence: commonly used as synonyms for exercised power, sometimes used as synonyms for power.

•Influence strategy: because of the potential ambiguity, perhaps better termed power strategy (Falbo, 1977)—normally a communication variable by which power is exercised, that is, converted from latent to activated. Examples would be command, recommendation, suggestion, or request for behavioral change transmitted to the power target. (Or perhaps the term "power means" should have been reserved for this construct, thereby necessitating the cumbersome "power base means" as label for the one presently designated as the former.) Sometimes this communication stage is bypassed or unnecessary—i.e., the target's environment is manipulated in a way to shape behavior, which is known as "ecological control" or "manipulative power" (Tedeschi & Bonoma, 1972, p. 15). For instance, a university restricts a student's choice by cancelling a course—without any threat, punishment, promise, reward, command, recommendation, suggestion, request, or even student awareness of the school's action. And sometimes the power source, i.e., perception of reward/punishment/etc. capability, is enough. In other words, one may not even need to ask for compliance.

Clearly, it is no disgrace for scholars to occasionally get stuck while navigating the conceptual tar pit encompassing social power. The accompanying material is offered to help clarify, organize, retrieve, and rescue, toward the aim of better understanding through more precise language, and ultimately better science. A set of definitions crammed with primitives seems to be the right medicine for now.

7. Conclusion

As with any specialization of behavioral science, it would be challenging to maintain unanimous, harmonious, field-wide accord on basic conceptualization in the social power area (although the time-honored power definition itself came close). Likewise with getting a consensus of scholars to agree that all measurement (of anything) is clean. The growth of social power research in recent years inevitably multiplies the variety of conceptual approaches and operational methods, and ipso facto the opportunity for differences of professional opinion concerning the appropriateness of those methods. But that does not mean a fundamental definition must change.

This paper simply highlights some common conceptual approaches and operational methods displayed recently in terms of their divergence from previously accepted practices. This is a proper scientific reaction when such a disparity occurs, especially when details of the discontinuity appear inadequately justified or defended.

It is understandable and laudable for the pioneering authors of this *Power 2.0* research stream to develop new operationalizations for the elusive power construct, if not so commendable to impose a renegade constitutive definition. Conceptually, power enjoyed somewhat uniform and stable treatment from its leading scholars historically, as cited. Measurement is another matter



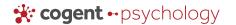
and an enduring difficulty, especially compared with the countless other abstractions dealt with routinely in social science. Maybe it is power's nature as a *contingent relational potentiality*, therefore an intangible will-o'-the-wisp to try to subdue empirically, that causes this additional complication. As Burt (1977, p. 15) laments, "power itself has no empirical indicators." The checkered history of attempted power measurement, actually the inadequate history, has been widely recognized by critics for decades (Burt, 1977; Kaplowitz, 1978), so innovative operational efforts are most welcome.

Survey-based questionnaire measures of power, or attempted measures, seem likely to be especially weak—as tentatively paralleled by some experiment-based questionnaire results of Table 2. Power holders and targets may be in no position to know the true power balance in a relationship, so their self-reports of such an abstract potential are of problematic face validity and little credence, especially since some power is imperceptible by definition (the type based on environmental manipulation). A few scholars have concluded that social power, by its nature, simply is unmeasurable (Kaplowitz, 1978, p. 131; March, 1966).

Perhaps in reaction to this record of futility, the body of research reviewed here sets out in a different operational direction. With quixotic attempts to measure the power variable via survey design possibly approaching life-cycle maturity, or even a dead end, and relatively few efforts to manipulate power experimentally during the prior period of hyperactivity in the subfield (roughly pre-millennium), many of the familiar studies examined in the preceding sections prudently do not repeat deficient orthodoxy. Seen instead are mainly the experimental designs incorporating social priming.

This initiative has been productive. Although the primary theme of the present immersion, on the operational side, has been to identify measures and manipulations that appear to inadequately capture the power construct, there have been positive exceptions. In particular, studies that find a way to objectively manipulate relative power imbalance experimentally, rather than merely priming power's accessory psychology, are defensible, have potential, and deserve recognition. So while many cited studies seem to swing and miss at the power entity, hence the previous assessment of "little to do with power," a worthy subset of this literature does have something to do with the construct of power. See, for example, Anderson and Berdahl (2002, studies 1 and 2); Briñol et al. (2007, experiments 1-3, 5); Dubois et al. (2015, experiments 3 and 6); Galinsky et al. (2003, experiment 1); Gruenfeld et al. (2008, experiments 1a and 3); Guinote (2008, studies 1-4); Maner and Mead (2010, experiments 3-5). Objective manipulations such as used in these projects are less subject to the chronic drawbacks and misuse as exposed. Although different manipulations do result from subjective researcher creativity, once created they amount to objectively observable behavior. An example of the behavior-as-power-proxy approach is the Dwyer and Walker (1981) game-format manipulation in which bargainer subjects are cast either as monopolists or duopolists. The former in negotiation with the latter constitutes a high-power condition; duopoly against a monopoly is low power.

Unfortunately, 76 of 145 reviewed studies are found to take conceptual and operational liberties with social power to the detriment of theoretical continuity. Perhaps that should be considered something of a news bulletin in the field, so scholars should not wax prematurely sanguine. The widespread arbitrariness and laxity over power definition cannot be overlooked in light of the dangers inherent, as documented in Exhibit 1 and surrounding explanation. The *Cliff Notes* version: Elective re-definition has caused problems with power operationalization and, therefore, the real possibility of an illusory body of theory, or at least a vitiated segment of theory. This tendency has gone much too far. With many studies in social psychology committing the transgression, and given the transcendence of the power construct, the foundation of current power research and even social science itself can be considered shaken—if not yet stirred—just as traditional power theory had been secure.



For a field to advance to its aspired scientific level, the centrality of definition in the scientific process must be respected. That correction alone applied to the latest incarnation of power research should produce improved operational consistency. Any deficiencies in extant theoretical structure resulting from empirical findings reliant on questionable conceptualization and operationalization have potential to metastasize, thereby infecting subsequent scientific labors. Hence, this work's focus on calling attention to potential problems in modern social power theory and the need for renewed devotion to scientific fundamentals. Recommended is the not-so-extremist prescription of adhering to the definition of power previously accepted for decades, especially since no basis for deviation has been put forth by the definitional usurpers. This conventional predicate would at least fulfill the first essential stage of the measure development process (Churchill, 1979, p. 67), and also promote inter-temporal theoretical consistency, literally across eras.

As of now, though, a large part of an entire research train appears to have gone off the rails in some important ways. Unless something is done about it, as this offering has attempted, another new generation of the deviant research area's work product may be misdirected and its disciples misled. Such are the true wages of inconsistent definition of a scientific construct.

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Notes

- Although "operationalization" is customarily equated with measurement procedure, based on its fundamental meaning as real-world indicant of a construct, the term is also applied here, appropriately, as experimentally manipulated independent variable.
- 2. As mentioned, many manipulation checks in this type of research are conceptually and operationally equivalent to the associated primes, i.e., self-report measures referencing "power," therefore subject to the same possible misconstrual as with the "power"referencing prime (and the same propensity exhibited by researchers and presumptive definers of power). As such, these checks amount to no more than raw testretest reliability—with a questionably minimal time interval between tests: Dubois et al. (2012, experiments 2-3, pp. 1051-2; 2015, experiment 5, pp. 9-10); Galinsky et al. (2003, experiment 3, p. 461); Guinote (2008, study 5, pp. 245-6, study 6, 247); Magee et al. (2007, experiment 4, p. 207); Mooijman et al. (2015, study 3b, pp. 80-1); Weick and Guinote (2008, study 1a, pp. 958-9, study 3, p. 963, study 4, p. 965).
- It is hereby revealed that every prior appearance of the word "control" in this presentation was a figure of speech, a temporary trope, merely a device for expository convenience necessitated because its ambiguity

- issue was not yet timely to raise. Of course, each use itself also would have been ambiguous.
- 4. There may be some over-interpretation or even misrepresentation regnant on this score. Although Thibaut and Kelley were a bit underdeveloped compared with contemporaneous definitional standards in fixating on only two power bases, reward and punishment (or cost, in their terms; 1959, pp. 102-3), they still explicitly distinguish power from its underlying resources (pp. 101, 124). Also, Fiske (1993), nearly universally relied upon as source by the Exhibit 1 authors, does not in fact define power as resource control (pp. 623-4).
- 5 Do not the cited scholars also have the requisite commitment, as well as background? Of course, yet they still contributed the superstructure of deviant conceptual and operational definition. Why trust the general population of readers not to do the same? (1) For whatever reason, those power researchers made a concerted choice to spurn a generally accepted definition and adopt a different one. For grounding, they frequently cite a source (Thibaut & Kelley, 1959) that was an outlier even in its own time, albeit a creative one. It appears, therefore, to have been a matter of contrarian preference, not background or commitment. (2) Also, the genesis of this scholarly family tree has been a very small phalanx of researchers, so the phenomenon is one of a particular misbegotten choice of definition that snowballed, rather than mass, independent development of com-
- 6. A point of possible interest is that the original spelling of the family surname was, in fact, "Lickert." This information is gained from personal communication with surviving members of Rensis Likert's immediate family. Even Wikipedia gets the pronuncation right, i.e., "pronounced 'Lick-urt'" (Wikipedia, 2011), which can be further verified by the University of Michigan's Institute for Social Research, long affiliated with Likert, its founding director.

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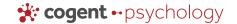
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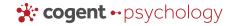


Exhibit 1. Summary of So-Called Power Research in Social Psychology

Classified by whether conceptual definition and operationalization conform to established power definition or not. Details include (1) description of conceptual definition (if deviant) and (2) power operationalization, annotated, for each study; (3) proportion of significant results and (4) median significance level (p-value) of reported results, by category of sampled studies. (5) Mean sample size for each category is also provided. (Asterisk denotes consumer psychology study.)

Conceptual conforming, operational conforming [3rd-ranked combination from Table 1]

Anderson & Galinsky, EJSP 2006, Studies 1, 2, and 4: (2) Self-report "sense of power" scale consistent with behavioral focus of definition; the issue is whether self-perceived power is congruent with power. Study 5: (2) objective manipulation based on asymmetric dependence.

Briñol et al., JPSP 2007, Experiments 1, 2, 3, and 5: (2) objective role manipulation, i.e., manager or subordinate.

*Jin et al., JCR 2014, Studies 1 and 5: (2) objective role manipulation, i.e., manager or subordinate. Study 2: (2) Self-report "sense of power" scale consistent with behavioral focus of definition; the issue is whether self-perceived power is congruent with power.

(3) 38/45 significant (.844), (4) .05 median significance (p), (5) 92.1 mean n

Conceptual conforming, operational deviant [8th-ranked combination from Table 1]

Anderson & Galinsky, EJSP 2006, Study 2: (2) Self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

Briñol et al., JPSP 2007, Experiment 4: (2) Self-recall measure conforms well to social power construct, but low-power condition confounded with *other's* power.

Galinsky et al., PS 2006, Experiments 1, 2a, 2b, and 3: (2) Self-recall "sense of power" primes conform to social power construct, but low-power condition confounded with *other*'s power.

*Jin et al., JCR 2014, Studies 3 and 4: (2) Self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

*Kim & McGill, JCR 2011, Experiments 1, 2, and 3: (2) Self-recall measure conforms well to social power construct, but low-power condition confounded with *other's* power.

(3) 57/78 significant (.731), (4) .04 median p, (5) 84.6 mean n

Conceptual conforming, operational ambiguous [1st-ranked combination from Table 1]

Anderson & Galinsky, EJSP 2006, Study 3: (2) Power-related word-fragment completion task may prime power psychology, but not power. Also, low-power condition confoundable with *other's* power.

Copeland, JPSP 1994: (2) objective manipulation, i.e., alternative organizational choices (high power) vs. none (low power), yet possible confound is acknowledged.

(3) 26/28 significant (.929), (4) .05 median p, (5) 91.0 mean n

Conceptual deviant, operational conforming [5th-ranked combination from Table 1]



Anderson & Berdahl, JPSP 2002, Studies 1 and 2: (1) Deviates in two ways, focus on resources (vs. behavior) and coercive power base; (2) objective manipulation via dyadic role.

*Dubois et al., SPPS 2010: (1) combined resource-behavior definition. Experiment 1: (2) hypothetical boss or employee scenario conforms to high/low power conditions (but also allows problems of "sense of power" proxy—i.e., whether perceived power is real). Experiment 3: (2) objective role manipulation, i.e., boss or employee. Experiment 4: (2) hypothetical boss or employee scenario conforms to high/low power conditions (but also allows problems of "sense of power" proxy).

*Dubois et al., JCR 2012, Experiments 4 and 5: (1) resource-based definition; (2) objective role manipulation, i.e., boss or employee.

Dubois et al., JPSP 2015: (1) resource-based definition. Experiment 3: (2) self-report "sense of power" scale consistent with behavioral focus of definition. (The issue is whether self-perceived power is congruent with power.) Experiment 6: (2) hypothetical self-assignment, i.e., boss or employee, at least conforms to social power construct.

*Dubois et al., JCR 2016, Experiment 3: (1) resource-based definition; (2) objective role manipulation, i.e., boss or employee.

Galinsky et al., JPSP 2003, Experiment 1: (1) resource-based definition; (2) objective role manipulation, i.e., manager or subordinate.

Galinsky et al., JPSP 2008, Experiment 4: (1) resource (and outcomes)-based definition; (2) objective role manipulation, i.e., manager for high power.

Gruenfeld et al., JPSP 2008: (1) Aside from use of the ambiguous "influence" and "control," definition is wrongly delimited to power bases, in fact, a subset of the French and Raven power bases. Experiment 1a: (2) objective selection, i.e., executive or student, peer or subordinate. Experiment 3: (2) objective selection, i.e., boss or subordinate, reinforced with additional cover story.

*Guinote, JPSP 2008: (1) combined resource-behavior definition. Studies 1 and 2: (2) objective role manipulation, i.e., judge or worker. Study 3: (2) objective role manipulation, i.e., majority/dominant or minority/subordinate group membership. Study 4: (2) hypothetical scenario as managing director or employee conforms to high/low power conditions (but also allows problems of "sense of power" proxy—i.e., whether perceived power is real).

*Jiang et al., JCR 2014, Experiments 1b and 4: (1) resource-based definition; (2) objective role manipulation, i.e., manager or subordinate.

Magee et al., PSPB 2007, Experiment 3: (1) combined resource-outcome definition, including the ambiguous "control"; (2) objective assignment to high or low power negotiating position.

Maner & Mead, JPSP 2010, Experiments 3, 4, and 5: (1) resource-based definition; (2) objective role assignment: group leader vs. control.

Mead & Maner, JPSP 2012, Experiments 1, 2, and 3: (1) resource-based definition; (2) objective assignment to leadership or non-authority (control) position.

Mooijman et al., JPSP 2015: (1) resource/outcome-based definition. Study 1a: (2) Multi-item "sense of power" scale at least conforms to social power construct. (The question is whether self-perceived power is equivalent to power.) Study 1b: (2) objective role manipulation, i.e., manager or control. Study 3a: (2) Survey-based questionnaire measurement of actual occupational power



position (management or labor). Study 3b: (2) Self-recall measure conforms to social power construct; usual confounding of low power and *other's* power with this type of operationalization is overcome by additional "no power" specification. Study 4a: (2) Multi-item "sense of power" scale at least conforms to social power construct. Study 4b: (2) Self-recall prime conforms to conceptual definition of social power. Study 4 c. (2) objective role manipulation, i.e., manager or control.

Mourali & Yang, JCR 2013, Study 2: (1) resource/outcome-based definition vs. traditionally accepted behavioral basis for social power; (2) self-recall "sense of power" measure roughly conforms to social power construct, but the issue is whether retrospective self-perceived power is congruent with power. (This operationalization, to its credit, uses control instead of putative low-power condition that confounds with other's power.)

*Mourali & Yang, JCR 2013, Studies 3 and 4: (1) resource/outcome-based definition; (2) self-recall "sense of power" measure roughly conforms to social power construct, but the issue is whether retrospective self-perceived power is congruent with power.

*Rucker et al., JCR 2011, Experiments 2 and 4: (1) combined resource-behavior definition; (2) objective role manipulation, i.e., boss or employee.

*Rucker & Galinsky, JESP 2009: (1) resource-based definition. Experiment 1: (2) Self-report "sense of power" scale consistent with behavioral focus of traditional definition; the issue is whether self-perceived power is congruent with power. Experiment 3 and 5: (2) objective role manipulation, i.e., boss or employee.

*Rucker et al., JCR 2014, Experiments 1B and 2B: (1) resource-based definition; (2) objective role manipulation, i.e., boss or employee.

(3) 220/288 significant (.764), (4) .02 median p, (5) 112.4 mean n (excluding survey n of 6,147)

Conceptual deviant, operational deviant [9th-ranked combination from Table 1]

*Dubois et al., SPPS 2010, Experiment 2: (1) combined resource-behavior definition; (2) self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

*Dubois et al., JCR 2012, Experiments 2 and 6: (1) resource-based definition; (2) self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

Dubois et al., JPSP 2015, Experiment 5: (1) resource-based definition; (2) self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

*Gal, JCR 2012, Experiment 1: (1) combined resource-behavior definition; (2) self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

Galinsky et al., JPSP 2003, Experiments 2 and 3: (1) resource-based definition; (2) self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

Galinsky et al., JPSP 2008, Experiments 4 and 5: (1) resource (and outcomes)-based definition; (2) self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

Gruenfeld et al., JPSP 2008, Experiments 1b, 2, 4, and 5: (1) Aside from use of the ambiguous "influence" and "control," definition is wrongly delimited to power bases, in fact a subset of the



French and Raven power bases. (2) Self-recall prime conforms to social power construct, but low-power condition confounded with *other's* power.

*Guinote, JPSP 2008, Studies 5 and 6: (1) combined resource-behavior definition; (2) self-recall essay measure conforms to social power construct, but putative low-power condition confounded with *other's* power.

*Jiang et al., JCR 2014, Experiments 1a, 2, 3, and 5: (1) resource-based definition; (2) self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

*Magee et al., PSPB 2007, Experiments 1A and 1B: (1) combined resource and outcome definition, including the ambiguous "control"; (2) self-recall measure conforms to social power construct, but low-power condition confounded with *other*'s power.

*Mourali & Yang, JCR 2013, Study 1: (1) resource- and outcome-based definition vs. accepted behavioral basis for social power; (2) self-recall measure roughly conforms to social power construct, but low-power condition confounded with *other's* power. Otherwise, measurement would be face valid for "sense of power" construct (vs. power per se), but authors do assert the power construct itself.

*Rucker et al., JCR 2011, Experiments 1 and 3: (1) combined resource-behavior definition; (2) self-recall measure conforms to social power construct, but low-power condition confounded with other's power.

*Rucker & Galinsky, JCR 2008, Experiments 1, 2, and 3: (1) resource-based definition; (2) self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

*Rucker & Galinsky, JESP 2009, Experiments 2 and 4: (1) resource-based definition; (2) self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

*Rucker et al., JCR 2014, Experiments 1A, 2A, and 3: (1) resource-based definition; (2) self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

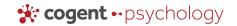
Smith & Trope, JPSP 2006, Experiments 1, 4, and 6: (1) Definition (using the ambiguous "control") confounds with countervailing power and power bases (reward/coercive). (2) Self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

(3) 140/194 significant (.722), (4) .03 median p, (5) 113.1 mean n

Conceptual deviant, operational ambiguous [7th-ranked combination from Table 1]

Bargh et al., JPSP 1995: (1) Definition constrained to *two* French and Raven power bases, rewards and costs (punishment). Experiment 1: (2) Priming task involving visual presentation of power-related words may induce (a part of) power psychology but is not necessarily equivalent to power itself. Experiment 2: (2) Power-related word-fragment completion task may prime power psychology, but not necessarily power. Target variable, after all, is power *concept*.

*Dubois et al., JCR 2012, Experiment 3: (1) resource-based definition. (2) "We all feel powerless (powerful)" priming banner might induce power psychology, but power? Manipulation check



confirms only power *feeling*—which may be sufficient for main experimental purpose, but should not be labeled "power."

Dubois et al., JPSP 2015, Experiment 4: (1) resource-based definition; (2) simplistic power "feeling" measure compatible with conceptual definition of social power, but confoundable with resource-based conception.

Dubois et al., JCR 2016, Experiment 1: (1) resource-based definition; (2) scrambled sentence completion may prime (some) power psychology but not necessarily the social relation of power. Low-power condition also confoundable with *other's* power.

*Dubois et al., JCR 2016, Experiments 2 and 4: (1) resource-based definition; (2) self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power. However, this operationalization also includes baseline condition, which mitigates the deficiency.

Galinsky et al., JPSP 2008, Experiment 1: (1) resource (and outcomes)-based definition; (2) five word fragments to prime power allows construal as other's power; no manipulation check.

Keltner & Robinson, PSPB 1997: (1) Combined resource-behavior definition also employs ambiguous "control," and delimits to power *exercise*. (2) Objective classification (based on questionnaire responses), i.e., traditionalist (powerful)–revisionist (powerless), involves possibly heroic assumption of correspondence with power condition and no confounding.

Magee et al., PSPB 2007, Experiment 2: (1) combined resource and outcome definition, including the ambiguous "control"; (2) power-related word-fragment completion task may prime power psychology, but not power. Experiment 4: (1) combined resource-outcome definition; (2) non-specific self-recall measure, though generally consistent with social power, allows misinterpretation as resource-based construct.

*Rucker et al., JCR 2011, Experiment 5: (1) combined resource-behavior definition; (2) self-recall measure's lack of specificity allows interpretation as resource-based construct.

*Rucker et al., JCP 2012: (1) resource-based definition; (2) nonspecific recall measure ("felt powerful/powerless") allows misconstrual as resource construct.

Smith & Trope, JPSP 2006, Experiments 2, 3, 5, and 7: (1) confounds with countervailing power and power bases. (2) Scrambled sentence completion may prime (some) power psychology but not necessarily the social relation of power; also construable as other's power. No manipulation checks.

(3) 116/154 significant (.753), (4) .03 median p, (5) 127.0 mean n

Conceptual ambiguous or absent, operational conforming [2nd-ranked from Table 1]

Fast et al., PS 2009: (1) no conceptual definition reported. Experiment 2: (2) objective role manipulation, i.e., manager or worker. Experiment 3: (2) self-recall measure conforms to social power construct, with baseline used (vs. confounding low-power condition). Experiment 4: (2) objective role manipulation, i.e., employer or not.

Guinote, JESP 2007a, Experiment 2: (1) "Outcome"-based definition could mean resources or behavior; ambiguous non-primitive terms "influence" and "control" also incorporated; (2) objective role manipulation, i.e., manager or subordinate.



Guinote, PSPB 2007b, Studies 3 and 4: (1) "Outcomes/influence"-type definition intrinsically ambiguous, and "influence" itself is ambiguous non-primitive, sometimes used as power synonym, therefore circular; (2) objective role manipulation, i.e., manager-subordinate, judge-worker.

Guinote et al., JPSP 2002, Studies 1 and 2: (1) "Outcome"-based definition could mean resources or behavior; ambiguous non-primitive terms "influence" and "control" also incorporated; (2) objective role manipulation, i.e., judge or worker.

Overbeck & Park, JPSP 2001: (1) "Outcome control" definition intrinsically ambiguous, i.e., could mean social or resource-oriented power, although surrounding text obliquely indicates *likely* social power understanding. Study 1: (2) objective role manipulation, i.e., professor or student. Studies 2 and 3: (2) objective role manipulation, i.e., judge or attorney.

Richeson & Ambady, JESP 2003: (1) no conceptual definition reported; (2) objective role manipulation, i.e., superior or subordinate.

*Weick and Guinote, JPSP 2008, Study 2: (1) Combined outcomes/behavior-based definition; "outcomes" could apply to either resources or behavior, but since behavior is explicitly included, resources appear to be (incorrectly) meant. Other non-behavior interpretations of "outcome" may be inherently reasonable, but would still be deviant from the classic understanding. (2) Objective role assignment, i.e., actual manager or subordinate.

Weick and Guinote, JPSP 2008, Study 4: (1) Combined outcomes/behavior-based definition; "outcomes" could apply to either resources or behavior, but since behavior is explicitly included, resources appear to be (incorrectly) meant. (2) Self-assessed "trait dominance" per eight-adjective scale may be consistent with traditional conceptual definition, or at least not explicitly deviant; the issue is whether self-perceived power is necessarily congruent with power.

(3) 129/149 significant (.866), (4) .04 median p, (5) 71.9 mean n

Conceptual absent, operational ambiguous [4th-ranked combination from Table 1]

Chen et al., JPSP 2001, Study 1: (2) Power concept or power psychology primed with word-search task including six power-related words. Absence of manipulation check allows possibility that other's power, vs. self-power, primed. Studies 2 and 3: (2) Trying to induce power with a high chair may appear risible, but the real independent variable is power psychology. If successfully primed, even though falsely labeled "power," the true power construct is a short theoretical step away—for the narrow research purpose. However, even that leap demands some validation evidence (in short supply in this entire research area). Here it is limited to a manipulation check's significant but substantively marginal difference in power-related word fragments completed: 3.2 vs. 2.3. The possibility is also left that other's power is being primed, not self-power.

(3) 9/11 significant (.818), (4) .03 median p, (5) 65.3 mean n

Conceptual ambiguous or absent, operational deviant [6th-ranked combination from Table 1]

Fast et al., PS 2009, Experiment 1: (1) no conceptual definition reported; (2) self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

Guinote, JESP 2007a, Experiments 1 and 3: (1) "Outcome"-based definition could mean resources or behavior; ambiguous non-primitive terms "influence" and "control" also incorporated. (2) Self-recall approach conforms generally to social power construct, but low-power condition confounded with *other's* power.



Guinote, PSPB 2007b, Studies 1 and 2: (1) "Outcomes/influence"-type definition intrinsically ambiguous, and "influence" itself is ambiguous non-primitive, sometimes used as power synonym, therefore circular; (2) self-recall prime conforms to social power construct, but low-power condition confounded with *other's* power.

Weick and Guinote, JPSP 2008, Studies 1a, 1b, and 3: (1) Combined outcomes/behavior-based definition; "outcomes" could apply to either resources or behavior, but since behavior is explicitly included, resources appear to be (incorrectly) meant. (2) Self-recall measure conforms to social power construct, but low-power condition confounded with *other's* power.

(3) 28/37 significant (.757), (4) .04 median p, (5) 84.4 mean n

Legend:

EJSP = European Journal of Social Psychology

JCP = Journal of Consumer Psychology

JCR = Journal of Consumer Research

JESP = Journal of Experimental Social Psychology

JPSP = Journal of Personality and Social Psychology

PS = Psychological Science

PSPB = Personality and Social Psychology Bulletin

SPPS = Social Psychological and Personality Science





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