

**Subjective and Intersubjective Paradigms
for the Study of Social Cognition**

William Ickes

University of Texas at Arlington

Arlington, Texas, USA 76019-0528

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Abstract

The premise of this article is that there are two paradigms for the study of social cognition: a subjective paradigm that has traditionally dominated the field, and an intersubjective paradigm that was originally developed for studies of interpersonal relations and group processes.

Ironically, although the second paradigm is rarely even acknowledged as an alternative paradigm for social cognition research, it does a better job than the first paradigm of illuminating the genuinely social aspects of social cognition. The two paradigms are compared and contrasted from the perspective of Kuhn's (1970) analysis of "the structure of scientific revolutions." The author argues that overt clashes between the paradigms have been minimal so far, most likely because the researchers who use them tend to ignore each other's work and to publish in different journals. He calls for a more active and informed dialogue that is based upon the recognition that the strengths of each paradigm can help to compensate for the weaknesses of the other.

What is the sound of one hand clapping?

—Zen koan

For centuries, disciples of Zen Buddhism have sought enlightenment by meditating on the paradox of the sound of one hand clapping. This paradox raises number of interesting questions. Can clapping occur if only one hand is involved? Can clapping be construed as the individual motion of a single hand, or does the concept of clapping require that two hands be brought together with some force? Is there any meaningful sense in which the term *one hand clapping* can be used? Is it an implied clapping in which the missing second hand participates only as an imagined, ghostly presence? And is the sound of one hand clapping therefore the ghost of a sound, the negation of a sound, or a nonsound? Or is it something ineffable—something that is beyond words, or the sound of words, or the sound of imagined words, or the sound of imagined words left unspoken?

The sound of one hand clapping is a useful metaphor for the central paradox of this article—the concept of subjective social cognition. This concept has the same oxymoronic quality as a Zen koan, and it should lead the disciples of cognitive social psychology to ask: How can cognition be both subjective and social at the same time? In what sense is social cognition really *social* if the cognition of only one person is involved? Can social cognition be construed as a mental soliloquy in which a single mind talks to itself about what might be going on in other minds, or does the concept of social cognition require that the conscious experience of at least two minds be brought together and related in some manner? Is there any meaningful sense in which the term *subjective social cognition* can be used? Is such cognition implicitly "social" in invoking the imagined thoughts, feelings, and reactions of others in a drama played out by a cast of ghosts who speak in silent voices within a single person's head? If so, how does

it compare to an *intersubjective social cognition* which involves the real thoughts, feelings, and reactions of two or more people who are participating in a real interaction with each other?

Two Paradigms for the Study of Social Cognition

In two previous articles, Richard Gonzalez and I have attempted to address such questions (Ickes & Gonzalez, 1994, 1996). Our point of departure was the assertion that although it is not widely recognized, there have historically been two major paradigms for the study of social cognition: a subjective paradigm and an intersubjective paradigm. Our use of the word "paradigms" follows that of Kuhn (1970), who conceives of them as broad-scope organizing perspectives for the conduct of research in a given area. In a Kuhnian analysis, different paradigms are based on fundamentally different assumptions about the nature of the phenomena being studied and the kinds of methods that are best suited to this task.

In the present essay, I begin by contrasting the subjective and intersubjective paradigms in their broadest and most abstract terms. I then examine these paradigms from a Kuhnian perspective and speculate about developments that the future might bring. Although I necessarily retrace some of the same ground covered in previous articles (Ickes & Gonzalez, 1994, 1996), my major goal is to demonstrate how Kuhn's (1970) ideas about "the structure of scientific revolutions" can be applied to the study of social cognition.

The Two Paradigms

In earlier treatments of this theme, Ickes and Gonzalez (1994, 1996) attempted to make explicit a distinction that has seldom been recognized: that historically there have been two major paradigms for the study of social cognition. The first is a *subjective* paradigm that is compatible with the assumptions of both mainstream cognitive psychology and mainstream cognitive social psychology. This paradigm has been so successful as a model for research that

it has dominated and virtually defined the field of social cognition throughout its history. Consistent with its epistemological assumptions, this first paradigm relies on a methodology in which participants are tested individually, in studies designed to ensure the conceptual and statistical *independence* of each participant's cognitions and behavior from those of the other persons tested.

In contrast, the second paradigm is an *intersubjective* paradigm that uses methods that were originally invented by interpersonal relations and small groups researchers in order to study interaction processes in dyads and small groups. Relative to the first paradigm, this second paradigm is neither well known nor widely used. In fact, it has imposed so many demands and difficulties on the researcher (i.e., in methodological, practical, statistical, and theoretical terms) that it has won relatively few adherents. Ironically, it is seldom even considered as an alternative paradigm for social cognition research. Consistent with *its* epistemological assumptions, this second paradigm relies on a methodology in which participants are tested together, in studies designed not only to permit the *interdependence* of their cognitions and behavior but also to examine these patterns of interdependence as phenomena of fundamental importance to the study of social cognition.

Throughout this article, the term "social" cognition will be used as a convenient shorthand for the subjective social cognition research that is guided by the first paradigm I have described above. The quotation marks are meant to indicate that because of the subject's independence and separation from others in these single-subject-per-session designs, the modifier "social" is of limited or even questionable applicability. In contrast, the term *social* cognition will be used as a convenient shorthand for the intersubjective social cognition research that is guided by the second paradigm I have described above. Here, the italics are meant to

indicate that because of the subject's interdependence and involvement with others in these dyadic or group designs, the modifier *social* is both essential and defining.

In general, then, the term "social" cognition should be taken as equivalent to the seemingly-paradoxical term "subjective social cognition," whereas the term *social* cognition should be taken as equivalent to the seemingly-redundant term "intersubjective social cognition." As we will see, neither the seeming paradox nor the seeming redundancy are accidental.

Essential Differences Between the Two Paradigms

The essential differences between the "social" cognition and the *social* cognition paradigms are summarized in Table 1. These points of difference, which necessarily overlap each other to some degree, are useful in making explicit the contrasting theoretical, methodological, and statistical assumptions that distinguish the two paradigms.

 Insert Table 1 about here

Contrasting theoretical assumptions. As the first two points of comparison in Table 1 reveal, implicit in the "social" cognition and *social* cognition paradigms are strikingly different theoretical views about the nature of social cognition. The first paradigm views social cognition as the subjective reactions of a single individual to a pre-programmed, ostensibly "social" stimulus. In contrast, the second paradigm views social cognition as the subjective reactions of at least two individuals to their interaction experience **and** as the shared, intersubjective meaning which these individuals jointly construct through their interaction behavior (Ickes et al., 1988; Schutz, 1970; Wegner et al., 1985). Consistent with these opposing views, the first paradigm is limited to the study of subjective phenomena occurring at the individual level of analysis,

whereas the second seeks to address both subjective and intersubjective phenomena occurring both at the individual level and at the dyad or group level.

As a consequence, researchers who use the first paradigm should find it relatively difficult to produce any evidence of emergent, intersubjective phenomena, however intrigued they might be by the possibility that such phenomena exist. In contrast, researchers who use the second paradigm should find it relatively easy to study such intersubjective phenomena, and to begin the long-term task of documenting and analyzing their different forms, origins, dynamics, and consequences. On the other hand, researchers who use the second paradigm should find it relatively difficult to study cognitive processes that are uniquely subjective, whereas researchers who use the first paradigm should not.

Contrasting methodological assumptions. As the next two points of comparison in Table 1 reveal, the "social" cognition and *social* cognition paradigms also display striking differences in their respective methodologies. In the "social" cognition paradigm, participants are tested individually and can interact only with people (i.e., experimenters or confederates) whose behavior is constrained by an experimental script. In the *social* cognition paradigm, participants are tested together—in dyads or in larger groups—and can interact with each other in a relatively naturalistic way that allows genuine mutual influence to occur. Ideally, at least, mutual influence should *not* occur in the "social" cognition paradigm; indeed, any evidence that the participant's behavior has altered the behavior of the experimenters, the confederates, or the other participants is typically regarded as a serious methodological problem or design flaw.

Contrasting statistical assumptions. As the third and fifth points of comparison in Table 1 reveal, the "social" cognition and *social* cognition paradigms reflect different statistical assumptions as well. The "social" cognition paradigm uses data-analytic models which assume

that each participant's cognitive responses are statistically independent from those of other participants. If this assumption is violated, the resulting interdependence in the participants' responses is typically viewed as an undesirable statistical artifact—i.e., as "nuisance variance" that the researcher must attempt to eliminate or control for in the data analyses. In contrast, the *social* cognition paradigm uses data-analytic models which assume that each participant's cognitive responses are statistically interdependent with those of the other participants in their dyad or group. Indeed, any empirical evidence of such interdependence is typically viewed with great interest, as potential evidence of an intersubjective phenomenon.

The paradox of subjective social cognition. Given these contrasts between the "social" cognition and *social* cognition paradigms, the seemingly paradoxical nature of subjective social cognition should be evident. Research on subjective social cognition derives from the paradoxical assumption that the best way to study social cognition is to first remove it from the social interaction context in which it naturally occurs. Ironically, however, by attempting to study social cognition outside of its natural context, researchers have severely limited the chances that any genuinely *social* processes can affect their subjects' cognitive activities (Fiske & Goodwin, 1993; Levine, Resnick, & Higgins, 1993). In addition, they have virtually eliminated the possibility of studying those intersubjective phenomena which various writers have argued are the ones that make *social* cognition a unique and distinctive field of research.

Subjective social cognition is the product of imagined, rather than real, interaction. It occurs entirely in one person's head, rather than in the intersubjective space that is created whenever two people jointly construct a shared meaning context through their conversation and nonverbal behavior (Hancock & Ickes, 1996; Schutz, 1970). Metaphorically, it is like the sound of one hand clapping, or like the actor who soliloquizes about relations with characters unseen.

On the one hand, it *is* a genuine aspect of social cognition, reflecting the theoretically important process by which we represent to ourselves the imagined or putative thoughts, feelings, and behaviors of other people. On the other hand, it is not the only aspect of social cognition, or even the most important one, because it fails to acknowledge—and therefore fails to address—the even more important process by which two or more minds attempt—and often fail—to meet. Paradoxically, however, it is the aspect of social cognition that has dominated researchers' attention for over 50 years.

As Jeremy Dugosh and I have suggested (Ickes & Dugosh, 2000), trying to understand social cognition by studying only its subjective aspects (and simultaneously ignoring its intersubjective aspects) is a bit like practicing swimming on dry land. The swimming, kicking, and breathing motions that one learns to make while practicing swimming on dry land are important—even essential—components of the process of swimming. But, in themselves, they do not confront the would-be swimmer with such crucial aspects of the actual swimming experience as the surface tension of the water, its pressure and drag beneath the surface, and its propensity to flow into any and all bodily orifices within an instant. Analogously, the study of subjective social cognition provides important—even essential—insights about the processes of social cognition as they occur inside one person's head. But, in itself, it does not and cannot inform us about those intersubjective aspects of social cognition that affect the social perceiver just as surely as the surface tension, density, and fluidity of the water affect the swimmer.

The message here should be clear: In its natural form, social cognition occurs in a social environment just as swimming occurs in an aquatic environment. And just as one would never confuse swimming on dry land with the complete, immersive experience of swimming, so one should never confuse the purely subjective aspect of "social" cognition with the complete,

immersive experience of *social* cognition in a genuinely intersubjective context.

The primacy of intersubjective social cognition. It makes sense that subjective social cognition has a somewhat odd, detached, fish-out-of-water quality attached to it, because it is not our primary mode of construing the social world—it is secondary and derived. Our primary mode of relating to others is through *intersubjective* social cognition. Indeed, as Ickes and Dugosh (2000) have noted, “We are born into an intersubjective world of ‘social reality,’ a world that was established before we were born and that will continue after we die. From our birth until our death, we are as fully immersed in this intersubjective world of social reality as a fish is immersed in its aquatic environment” (p. 161). The primacy of intersubjective social cognition is such that, most of the time, we take it completely for granted.

We should not overlook its importance, however, as various writers have reminded us. For example, Le Bon (1896) was one of the first theorists to argue that intersubjective phenomena should be a major focus of social psychological research. Several other theorists, including Mead (1934), Merleau-Ponty (1945), Asch (1952), and Heider (1958) have also regarded the concept of intersubjectivity as fundamental to our understanding of social perception and social cognition (cf. Markus & Zajonc, 1985). More recently, Ickes and his colleagues have proposed that if the study of *subjective phenomena* involving or occurring within a single conscious mind is the proper domain of mainstream cognitive psychology, then the study of *intersubjective phenomena* involving or occurring between at least two conscious minds should be the proper domain of cognitive social psychology (Ickes, Tooke, Stinson, Baker, & Bissonnette, 1988; Ickes, Stinson, Bissonnette, & Garcia, 1990).

Despite this long theoretical tradition, however, the empirical study of intersubjective social cognition has not been a priority of most researchers who publish in journal outlets such as

Social Cognition or the *Attitudes and Social Cognition* section of *JPSP*. Even in this new millennium, they continue to study subjective social cognition using their traditional individual-subject-per-session designs, leaving the study of intersubjective social cognition to researchers who publish mostly in the relationships and group process journals.

"Social" Cognition and *Social Cognition* as Kuhnian Paradigms

I believe that both approaches are important, but that their status as alternative paradigms has not been sufficiently emphasized. My goal, therefore, is to discuss how, from a Kuhnian perspective, the subjective social cognition paradigm and the intersubjective social cognition paradigm are alternative scientific paradigms that each offer a different view of what social cognition “really is” and how it should be studied. Because an analogy might be useful in guiding this discussion, let me begin by citing Kuhn’s (1970) example of the competing views within the field of physics regarding of the nature of light:

During the eighteenth century the paradigm for this field was provided by Newton's *Opticks*, which taught that light was material corpuscles. At that time physicists sought evidence, as the early wave theorists [would] not, of the pressure exerted by light particles impinging on solid bodies . . . [Decades later] physics texts taught that light was transverse wave motion, a conception rooted in a paradigm that derived ultimately from the optical writings of Young and Fresnel in the early nineteenth century . . . [Still more decades later] today's physics textbooks tell the student that light is photons, i.e., quantum-mechanical entities that exhibit some characteristics of waves and some of particles . . . These transformations of the paradigms of physical optics are scientific revolutions, and the successful transition from one paradigm to another via revolution is the usual developmental pattern of mature science.

(pp. 11-12, brackets mine)

At the heart of Kuhn's (1970) analysis is an exploration of the dynamic processes that underlie the structure of scientific revolutions. As an upstart paradigm emerges to challenge a traditional one, there is increasing pressure on scientists to take sides and ally themselves with one paradigm or the other. Proponents of the existing paradigm find themselves cast in the role of defenders of the faith, whereas proponents of the new paradigm find themselves cast in the role of heretics and revolutionaries.

As the tension between both camps escalates, proponents of the traditional paradigm—often, older scientists who have attained positions of power and influence within their fields—may either ignore the emerging paradigm or attempt to suppress it through a variety of means. These means can include denying proponents of the new paradigm essential resources such as teaching and research positions, institutional and extramural support, and opportunities to publish their work in major journals. If the new paradigm succeeds in establishing itself despite such attempts to suppress it, proponents of the existing paradigm typically do not rush to embrace it and acknowledge its utility. Instead, their more likely response is to attempt to refute it through scientific debate and the collection of new data that are expected to support and uphold the existing paradigm while discrediting the new one. At the same time, of course, the proponents of the new paradigm will attempt to design and conduct their own "crucial experiments," which are similarly expected to discredit the incumbent paradigm while demonstrating the greater explanatory power of the new one.

Like political revolutions, these scientific revolutions can result in many different outcomes. Occasionally, the outcome is definitive and clearcut, as when the triumph of one paradigm over the other is complete and decisive. More often, however, the two paradigms coexist side-by-side, and they compete more or less actively over a protracted period of time in a

dialectical relationship. In this dialectic, the old paradigm provides the thesis, the new paradigm provides the antithesis, and the synthesis often depends upon the emergence of a third, more powerful paradigm that can successfully subsume and integrate the findings from the two earlier ones.

Three Propositions

I believe that Kuhn's conception of scientific paradigms can be applied directly to the contrast between the subjective and intersubjective paradigms for the study of social cognition. To help illustrate the heuristic value of this application, I offer the following three propositions:

1. Just as light-as-particles and light-as-waves represent alternative paradigms for the physical study of light, so do "social"-cognition-as-subjectivity and *social*-cognition-as-intersubjectivity represent alternative paradigms for the psychological study of social cognition. Whether such paradigms are also mutually exclusive is, of course, a matter for debate. But it is not just a matter for debate alone; it is also a matter for subsequent research to resolve.

2. Just as the adherents of the light-as-waves paradigm were led to address different problems and to test for different effects than were the adherents of the light-as-particles paradigm, so are the adherents of the (intersubjective) *social* cognition paradigm led to address different problems and to test for different effects than are the adherents of the (subjective) "social" cognition paradigm.

3. Just as the light-as-photons paradigm forced researchers to recognize that light is neither entirely particles nor entirely waves but quantum-mechanical entities that exhibit characteristics of each, so does the *social* cognition paradigm force researchers to recognize that social cognition is neither an entirely subjective phenomenon nor an entirely intersubjective phenomenon but one that exhibits characteristics of each.

In the sections to follow, I discuss each of these propositions in turn. The goal of this discussion is to elaborate and defend a Kuhnian view of the subjective and intersubjective paradigms for the study of social cognition, and to set the stage for a discussion of some implications of this view.

Proposition 1. My first proposition is that “social”-cognition-as-subjectivity and *social*-cognition-as-intersubjectivity represent alternative paradigms for the study of social cognition. They are alternative paradigms in the Kuhnian sense of this term, because they are based on fundamentally different assumptions about how the phenomena of interest should be conceptualized and studied empirically. These contrasting assumptions have already been discussed and are summarized in Table 1 above.

The major conceptual difference between the two paradigms concerns the question of whether social cognition is purely subjective or whether it is intersubjective as well. In our earlier articles (Ickes & Gonzalez, 1994, 1996), Richard Gonzalez and I addressed this question by first noting that, in the case of object perception, the object we perceive is merely a percept, whereas in the case of interpersonal perception, the object we perceive—another human being—perceives us back! Moreover, our mutual recognition that the other person perceives us back adds an even more profound dynamic to interpersonal perception, making it not only reciprocal but intersubjective as well (Mead, 1934; Sartre, 1943).

If social cognition is not merely subjective but is intersubjective as well, what is an intersubjective phenomenon and how can such a phenomenon be identified in operational terms? Ickes and Gonzalez (1994, 1996) proposed that, from a conceptual standpoint, an intersubjective phenomenon can be defined as one that reflects the cognitive interdependence of at least two interacting individuals (Wegner, Giuliano, & Hertel, 1985; Larsen & Christensen, 1993). The

qualifying phrase "at least two interacting individuals" obviously limits the domain of intersubjective phenomena to dyadic or group contexts in which the cognitive responses of at least two individuals are assessed. The interaction of these individuals is broadly defined; it is not restricted to face-to-face encounters, but can include communicative exchanges by telephone, written correspondence, and a variety of other means as well.

On the other hand, this definition of interaction must rule out cases in which people experience similar cognitive responses by chance or coincidence. For example, when two people watch the same movie at the same time in different cities, they are not "interacting," even though they may be experiencing very similar cognitive responses to the movie at the same point in time (see Asch, 1952, who made a similar point). Cases such as these indicate the crucial role of cultural knowledge that is available and, to a large extent, "shared" by most, if not all, of the members of that culture. But the cognitive similarity experienced in such cases is still clearly artifactual: If the two people had chosen to watch different movies at the same time (or the same movie at different times), the striking "coincident similarity" in their cognitive responses would no longer be observed.

From an operational standpoint, the identification of an intersubjective phenomenon requires that two conditions be met (Ickes & Gonzalez, 1994, 1996). First, the cognitive responses of at least two interacting individuals must be measured. Second, these responses must be found to be interdependent. These two conditions can be interpreted as clarifying what Asch (1952, p. 164) meant when he said that "psychological interaction requires a minimum of mutuality."

Although assessing cognitive responses is not a trivial task, several researchers have developed new and remarkably reliable methods—such as the *thought-listing technique*—that

enable such assessment (e.g., Brock, 1967; Cacioppo & Petty, 1981; Ericsson & Simon, 1984; Greenwald, 1968; Ickes, Robertson, Tooke, & Teng, 1986; Pennington & Hastie, 1986). From the resulting data, probabilistic evidence of cognitive interdependence can be established through the application of statistical techniques that indicate whether there is convergence or divergence in the cognitive responses of dyad or group members as a function of their interaction. These statistical techniques are as old as the intraclass correlation introduced by Karl Pearson in 1901 and as new as the "statistics of interdependence" developed by David Kenny and his colleagues (e.g., Kashy & Kenny, 2000; Kenny, 1988, 1995, 1996; Kenny, Kashy, & Bolger, 1998; Kenny & LaVoie, 1985) and by Richard Gonzalez and Dale Griffin (e.g., Gonzalez & Griffin, 1999, 2000; Griffin & Gonzalez, 1995).

Researchers who have applied such methodological and statistical techniques have already identified several intersubjective phenomena of the type that the intersubjective social cognition paradigm seeks to address. We will consider these phenomena in some detail below. For our present purposes, it is sufficient to note that both the subjective and the intersubjective social cognition paradigms do seem to qualify as scientific paradigms in the Kuhnian sense. As the comparisons in Table 1 make clear, they are major organizing perspectives for the study of social cognition that implicate very different views of the phenomena of interest and how they should be studied.

Proposition 2. My second proposition is that the adherents of the (intersubjective) *social* cognition paradigm are led to address different problems and to test for different effects than are the adherents of the (subjective) "social" cognition paradigm. Evidence supporting this proposition is readily available. Earlier, I suggested that it was the inability of the "social" cognition paradigm to address certain phenomena of interest to interpersonal relations and small

groups researchers that motivated these researchers to develop a *social* cognition paradigm that was suitable for this task. If there are specific examples of intersubjective phenomena that were identified and studied by means of the second paradigm, but were not identified and studied by means of the first paradigm, then these examples can be adduced in support of Proposition 2.

Such examples are not difficult to find because our two necessary conditions for operationally defining an intersubjective phenomenon—the assessment of the cognitive responses of two or more interactants and the assessment of the interdependence of those responses—are neither highly stringent nor highly restrictive (Ickes & Gonzalez, 1994, 1996). Consequently, it should come as no surprise that the available literature provides several examples of participants' cognitive responses either converging or diverging as a function of their interaction in dyads or in larger groups. As Ickes, Stinson, et al. (1990, p. 730) have noted:

Group dynamics researchers have for some time studied intersubjective phenomena under headings such as brainstorming (Diehl & Stroebe, 1987; Street, 1974), group decision making (Janis & Mann, 1977; Miller, 1989; Stasser, Kerr, & Davis, 1989), groupthink (Janis, 1972; McCauley, 1989), group polarization (Moscovici & Zavalloni 1969; Myers, 1982; Myers & Lamm, 1976), group socialization (Moreland & Levine, 1982; 1989) and majority and minority influence (Latané & Wolfe, 1981; Maass, West, & Cialdini, 1987; Moscovici & Mugny, 1983; Nemeth, 1986).

Most of these intersubjective phenomena are characterized by a general convergence of the participants' cognitive responses as a function of their membership and interaction in the group. Prototypic examples of this convergent influence are provided by studies of group decision-making and groupthink—areas of research focusing on interaction contexts in which achieving a unified consensus is often assumed to be the preeminent value. However, some of these intersubjective phenomena may be characterized by a general divergence of the

participants' cognitive responses as a function of their membership and interaction in the group (e.g., group polarization), or by a divergence of the larger group into factions whose members subsequently converge to adopt the appropriate subgroup mentality (e.g., majority and minority group influence).

More recently, interpersonal relations researchers have also begun to study a wide range of intersubjective phenomena. A general research paradigm for studying such phenomena has been developed by Ickes and his colleagues, who have extended the unstructured dyadic interaction paradigm (Ickes, 1982, 1983) to assess dyad members' subjective thoughts and feelings, in addition to their overt behavior (Ickes et al., 1986; Ickes & Tooke, 1988; Ickes, Bissonnette, et al., 1990). To date, this paradigm has been used to explore intersubjective phenomena that include dyadic intersubjectivity (Ickes et al., 1988) and empathic accuracy (Ickes, 1997). According to the operational criteria proposed by Ickes and Gonzalez (1994, 1996), these phenomena are intersubjective because they involve both (1) the assessment of the cognitive responses of both dyad members, and (2) the assessment of the degree of convergence, matching, or similarity in these cognitive responses.

The methodological power of the unstructured dyadic interaction paradigm represents only one advance in the study of intersubjective social cognition. The past decade has seen the development of powerful new statistical models for investigating intersubjective phenomena such as consensus and meta-accuracy in person perception (Kenny, 1994; Kenny & Albright, 1987; Kenny & DePaulo, 1993; Malloy & Albright, 1990), and "coorientation" and "shared meaning" effects (Chaplin & Panter, 1993; Kenny & Kashy, 1994). Techniques for studying both within- and between-dyad interdependence have also proven useful in identifying *emergent* social phenomena—for example, that mutual gaze is more than the "coincident looking" defined

by the joint probability of the participants' individual gazing behavior (Bissonnette, 1992). These methodological and statistical innovations have been further complemented by creative theoretical models such as Wegner, Giuliano, and Hertel's (1985) analysis of transactive memory and other forms of cognitive interdependence in close relationships.

It is important to note that the study of intersubjective social cognition does not necessarily require a complicated methodology. A simple paper-and-pencil study that examines the pattern of correlation in the self-report ratings of husbands and wives across a set of attitude items (or a set of marital adjustment items) can be a valid study of intersubjective social cognition if alternative interpretations of the results can be ruled out. Because the minimal conditions for a *social* cognition study are that the researcher (1) measures the cognitive responses of at least two individuals who have interacted to some degree, either in the present or in the past, and (2) tests for evidence of interdependence in these responses, it need not be difficult to conduct research of this type. Even the degree of the individuals' "interaction" can be minimal, as demonstrated in studies showing significant self-other agreement in ratings of extraversion at nearly "zero" acquaintance (see Kenny, 1994, pp. 196-198).

In summary, far from being a hopelessly difficult enterprise, the study of intersubjective social cognition can be surprisingly easy as long as researchers are willing to break away from using individual-subject designs (i.e., those aggregating the data from individual subjects) and use dyadic or small-group designs instead.

Proposition 3. My third proposition is that just as the light-as-photons paradigm forced researchers to recognize that light is neither entirely particles nor entirely waves but is instead a quantum-mechanical phenomenon that exhibits characteristics of each, so does the *social* cognition paradigm force researchers to recognize that social cognition is neither an entirely

subjective phenomenon nor an entirely intersubjective phenomenon but one that exhibits characteristics of each. If we view social cognition in terms of the psychological meaning experienced by two interacting individuals, this meaning can be decomposed into (1) the idiosyncratic meaning experienced by Person A, (2) the idiosyncratic meaning experienced by Person B, and (3) the shared, intersubjective meaning that represents A and B's "working consensus" or "common ground." ¹

Although theoretical and measurement problems are associated with all three of these meaning components, the third component has been regarded as especially problematic and controversial by researchers. If intersubjective meaning exists, what evidence can be adduced for it? Again, my answer is that intersubjectivity is indicated—though not guaranteed—when there is interdependence in the cognitive responses of two or more interactants.

A useful empirical example is provided by the two studies of dyadic intersubjectivity reported by Ickes, Tooke, et al. (1988). In these studies, the researchers content-coded all of the specific thoughts and feelings that pairs of same-sex strangers reported having had in their initial, unstructured interactions. (A video-cued recall procedure was used immediately after the interaction to elicit these thought/feeling reports). To test for evidence of interdependence in the dyad members' cognitive and affective responses, the researchers computed intraclass (i.e., interpartner) correlations across the resulting set of thought/feeling content codes, aggregated across each dyad member's set of thought/feeling entries.

The results of both studies revealed significant convergence (i.e., similarity) in the responses of the male strangers, but not the female strangers, on affectively relevant measures of thought/feeling content. The authors interpreted these results as deriving from a greater need on

the part of male strangers to monitor the emotional tone of their initial interaction in order to keep it within a narrower, and mutually comfortable, range of affectivity. This interpretation was supported by subsequent comparisons of the variance in the amount of smiling and eye contact observed in the male-male and female-female dyads. In both studies, there was significantly less variance in these "emotional involvement" measures in the male-male dyads, suggesting that the male strangers were indeed more preoccupied with the shared, intersubjective concern of keeping their initial interaction within a more narrow, but mutually comfortable, range of affective expression.

The results of these dyadic intersubjectivity studies are noteworthy three respects. First, they demonstrate that patterns of interdependence in the cognitive responses of dyad or group members can be used to identify *intersubjective themes* in their relationships. Second, they illustrate the heuristic value of studying such intersubjective phenomena. Quite simply, if the researchers had not sought to test for and interpret the intersubjectivity correlations in their data, it is unlikely that it ever would have occurred to them to also test for *variance* differences in the smiling and eye contact displayed in the male-male and female-dyads. Third, the results of these studies indicate that it is possible to rule out artifactual interpretations of the cognitive/affective interdependence that results from social interaction. When the researchers compared the intersubjectivity correlations in their actual dyads with the corresponding correlations for participants in randomly-matched "pseudodyads," the results indicated that the former correlations were simply not an artifact of the male subjects having spent five minutes with any same-sex partner in the same physical location.

It appears, then, that social cognition is neither an entirely subjective phenomenon nor an entirely intersubjective phenomenon, but one that exhibits characteristics of each. If we can

assume that this is true, then we ought to be able to isolate and study social-cognitive phenomena at both the individual (subjective) and dyad/group (intersubjective) levels of analysis. Although appropriate statistical models for this type of multilevel analysis have not been widely available or widely used in the past, the greater use of hierarchical linear modeling (Hoyle, Georgesen, & Webster, 2001; Kenny, Bolger, & Kashy, 2002; Nezlek & Zyzniewski, 1998; Pierce & Lydon, 2001) and the recent development of other "statistics of interdependence" (Gonzalez & Griffin, 2000; Griffin & Gonzalez, 1995; Kenny, 1988, 1995, 1996) now make it possible for researchers to study both individual-level (i.e., subjective) and dyad- or group-level (i.e., intersubjective) effects in data from dyadic or small-group designs.

Implications of a Kuhnian View of Social Cognition Research

From the standpoint of a Kuhnian perspective, we should expect that conflict will eventually develop between adherents of the traditional (subjective) social cognition paradigm and adherents of the more recent (intersubjective) social cognition paradigm. Before the conflict becomes overt, however, there is likely to be a period in which the adherents of the older paradigm simply ignore the newer one, either dismissing it out of hand or regarding it as having little potential relevance to their subject matter (Kuhn, 1970).

A period of this sort is clearly evident in the history of social cognition research; indeed, it has been going on for decades and may very well continue for decades more. It is easy to see, for example, that studies of cognition or affect that use dyadic or small-groups designs are seldom found in publications such as *Social Cognition* or the *Attitudes and Social Cognition* section of *JPSP*. This outcome occurs not because such studies are scarce (in fact, they are commonly found in relationships and group process journals), nor because such studies don't concern social cognition (in fact, they often do a better job of balancing the "cognitive" aspects

of the study with the “social” aspects). It occurs instead, I believe, because traditional social cognition researchers (i.e., those who were trained to use individual-subject procedures that were often borrowed or adapted from mainstream cognitive psychology) have, for the most part, not been willing to acknowledge that the work of relationship and group process researchers is particularly relevant to (let alone central to) the domain of social cognition.

Whether by intent, by historical accident, or by some combination of the two, the researchers who study social cognition in individual subjects and the ones who study it in dyads and groups have largely segregated themselves into two camps that work independently of each other. They each train their graduate students in their own respective methods and research designs, and they each tend to publish in their own respective journals. For obvious reasons, then, segregation seems to be fairly effective in keeping the two sides from arguing with each other. But another, less obvious reason may be involved as well: segregation also fosters the convenient fiction that, because certain people publish in “relationships journals” or in “group process journals,” their research must concern “relationships” or “group processes”—topics which by the very sound of them are not “social cognition” and can therefore be ignored.

At present, then, there is little or no overt conflict between the two camps, primarily because they have established their own separate campgrounds and only occasionally venture onto each other’s turf. Researchers who study subjective social cognition are rarely threatened by those who study intersubjective social cognition (and vice versa), because both groups of researchers are free to use their own methods and publish in their own journals without much fear of being attacked or interfered with by members of the other group.

Is this situation likely to change in the foreseeable future? Who knows? Perhaps these two research traditions will continue to develop for decades in parallel, with relatively little

mutual regard or paradigmatic conflict occurring. According to a Kuhnian analysis, however, if enough time passes and enough isolated skirmishes occur at the border between the two camps, more open and wide-scale conflicts regarding their alternative paradigms will eventually take place. As the new paradigm emerges and is increasingly recognized as both an alternative and a potential threat to the traditional one, adherents of the traditional paradigm can be expected to attack the new paradigm and attempt to refute the contrasting assumptions on which it is based.

Can we expect this kind of paradigmatic confrontation in the case of social cognition research? My own prediction is that there won't be much evidence of it for a while (a while being several years, at least). Eventually, however, I think that researchers who study subjective social cognition will feel enough of a threat from those who study intersubjective social cognition that the battle will be joined. At this point, the assumptions of the "upstarts" will be vigorously challenged. No one can predict for certain, of course, what form such a challenge will take. However, based on my own view of past history and present trends, I think that the following objections—theoretical, methodological, and statistical—are the ones most likely to be raised.

Theoretical objections. The most fundamental theoretical (or meta-theoretical) objection to an intersubjective view of social cognition is the argument that intersubjectivity isn't real—it is sheer illusion. This objection is consistent with the view of the most radical of the radical behaviorists, but it follows even more directly from the radical solipsist view in philosophy that the only concrete reality is that of one's own thoughts and feelings. One cannot seriously maintain this objection and at the same time act as a scientist, however, because science is predicated on the assumption of an intersubjective world in which scientists can understand and test each other's theories or hypotheses, successfully replicate each other's methods, and argue

meaningfully about the results. As Schutz (1970, p.163) has noted in this regard, the hypocrisy of self-professed radical solipsists becomes immediately evident whenever they teach classes, attend professional conferences, or publish books and articles with the aim of trying to persuade other people that the assumption of intersubjectivity is unwarranted!

A more serious objection to the intersubjective view grants this last point. Indeed, it uses this point to argue that intersubjectivity is not a theoretical concept but a meta-theoretical one that falls outside the boundaries of what science is able to address. Although I have somewhat more sympathy for this position, I nonetheless believe that a strong case for the scientific study of intersubjective phenomena can be made in both theoretical and empirical terms. Just as there are specific theoretical implications of a putative casual link between cigarette smoking and lung cancer which can be evaluated on the basis of relevant empirical findings (see Abelson, 1995, pp. 183-184), so are there specific theoretical implications of the existence of intersubjectivity which can similarly be evaluated.

To cite just a few of many possible examples, if social cognition is not merely subjective but intersubjective as well, then there should be substantial agreement about the content of certain social stereotypes—and there is (e.g., Briton & Hall, 1995; Manstead, 1992; Schaller, Conway, & Tanchuk, 2002). There should be evidence that people know how other people in general view them—and there is (Kenny & DePaulo, 1993). And there should be greater empathic accuracy between friends than between strangers—and there is (Stinson & Ickes, 1992; Graham, 1994). Other implications of the intersubjective view have been proposed in a recent article (Ickes, in press), in which I argue that intersubjective social cognition should differ from subjective social cognition in several respects that might be tested empirically. A list of the hypothesized differences is provided in Table 2.

Insert Table 2 about here

These examples, along with many others mentioned earlier in this essay, should leave no doubt that intersubjective phenomena are both real and amenable to scientific study. In my opinion, any assertions to the contrary are simply and demonstrably false.

Methodological objections. Most social cognition researchers already know this, of course. Therefore, instead of denying that intersubjectivity occurs or that it lies outside the boundaries of scientific inquiry, they retreat to the objection that it is methodologically intractable because it cannot readily be addressed by the individual-subject designs and methodologies on which cognitive psychologists and cognitive social psychologists have traditionally relied.²

This methodological concern has so daunted researchers during the past half-century that the overwhelming majority of them have chosen to cast their nets in the safe and familiar waters of subjective social cognition rather than risk running aground on the hidden reefs and rocky shoals of intersubjective social cognition. And why shouldn't they? Doing research on the subjective aspects of social cognition, using individual-subject designs and the statistical models appropriate to such designs, is exactly what they have been trained to do.

With some justification, then, researchers in the past have argued that study of intersubjective social cognition has been neglected not because it is unimportant, but because it is so seemingly intractable. The implication of this argument is that if ever the appropriate methods and statistical models became available, researchers would quickly begin to give intersubjective phenomena the long-overdue attention they deserve. The good news, of course, is

that such methods and statistical models *are* now available, as I have noted in some detail above. The bad news is that most traditional social cognition researchers continue to display little or no interest in using them. Consistent with Kuhn's (1970) perspective, researchers who have built their careers using individual-subject designs and conventional statistical techniques are unlikely to adopt the newer methods, designs, and statistical techniques of the alternative paradigm, and they are unlikely to encourage their graduate students to adopt them either.

Statistical objections. From a statistical standpoint, the traditional objection to an intersubjective view of social cognition has been the problem of dealing with the interdependence of participants' responses in dyads and larger groups. This objection is no longer valid, as noted above, but it still tends to persist within the ranks of researchers who are firmly wedded to the idea of testing one participant at a time and using an ANOVA to analyze the results.

A more contemporary objection might acknowledge the current availability of hierarchical linear modeling and other "statistics of interdependence," but then claim that these techniques cannot be used to model something as ineffable as the dyad- or group-level outcome of an intersubjective process. This objection isn't valid either, of course, because what is being modeled in these cases is always some kind of latent variable, the indicators of which are the cognitive responses of the individual dyad or group members (see Gonzalez & Griffin, 2000). If the modeling of latent variables in multilevel analyses can be done at all—and it clearly can—then there is no reason why it can't be used to estimate the effects of intersubjective processes.

Cognitive Social Psychology: Yin and Yang

In cognitive social psychology, the two paradigms are yin and yang: the strengths of one correspond to the weaknesses of the other, and vice versa. The subjective paradigm permits a

better view of subjective phenomena than of intersubjective ones; the intersubjective paradigm does the reverse. The subjective paradigm specifies causal relationships well, but has poor ecological validity; the intersubjective paradigm has the opposite strength and weakness. And whereas critics of the intersubjective paradigm will complain that “It allows too many sources of influence to vary at once,” critics of the subjective paradigm will argue that “Many of the statistically significant effects you obtain in these studies of individuals tested alone will prove to be overridden by other, more powerful influences that occur in actual dyadic or group interactions, or will be qualified by so many interacting variables as to make your findings appear simplistic at best and misleading at worst.”

Given these contrasting strengths and weaknesses, I think the best course for the field of social cognition is to recognize that both paradigms have value, each in its own terms, and that the greatest benefit will result from researchers in both camps developing a more active and informed dialogue with each other. To facilitate this dialogue, journals that specialize in social cognition research should do a better, more proactive job of including articles from the intersubjective perspective in the issues they publish.

As a final note, I would like to return to the analogy that I have been developing throughout this essay. I suggest that, in one aspect, we humans are very much like particles, manifesting ourselves as separate, individual beings. In another aspect, however, we are very much like waves, manifesting ourselves as ripples of energy and influence in the ever-shifting currents of the social force-field. I believe that the challenge for social psychologists, as for physicists, is to attempt to reconcile these two aspects, and to give both of them the theoretical respect and the empirical attention they deserve.

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Footnotes

¹Although all three components could display considerable variability both within and between social interactions, all three components are necessary to any theoretical view that aspires to account for social-cognitive phenomena such as the following:

1. Instances in which interaction partners A and B understand, and also realize that their partner understands, that they disagree regarding Issue Z.
2. Instances in which A understands that B holds a different position on Issue Z—a position that A finds sensible from B's perspective but not from A's own perspective.
3. Instances in which B realizes with amusement that A thinks they are having a conversation on a different topic than the actual topic B has initiated.
4. Instances in which A realizes that although B *thinks* they have a lot in common, this is mostly wishful thinking on B's part.

And so on. In all of these cases, a complete understanding of A and B's psychological situation requires that we, as outside observers, know (1) what A uniquely thinks and feels, (2) what B uniquely thinks and feels, and (3) what they think and feel together.

²Not all researchers take this position, however. Some researchers (e.g., Harkins, personal communication) contend that many, if not most, of the phenomena implicated by an intersubjective view of social cognition can be addressed without having to use dyadic and small-group designs at all. In the optimistic spirit of Floyd Allport (1924), they argue that certain intersubjective phenomena can be addressed through the use of individual-subject designs that have been creatively fashioned for this purpose. Harkins' own research on social loafing provides a good example of this approach, demonstrating that the mere belief that one is either acting as an individual or as a member of a group can be successfully manipulated in individual-subject designs and can produce social loafing effects that are comparable to those obtained in actual group research (Harkins, Latané, & Williams, 1980; Harkins & Szlymanski, 1989; Latané, Williams, & Harkins, 1979).

As David Barone has noted, however, “Such research maximizes control at the expense of ecological validity. It offers a way to address certain questions but not others. It can show threshold effects for the impact of [presumed or imagined] others; however, only face-to-face interaction will reveal the full impact.” (Barone, personal communication; brackets mine)

Table 1. Essential differences between the two paradigms

The "Social" Cognition Paradigm	The <i>Social</i> Cognition Paradigm
1. Views social cognition as the subjective reactions of a single individual to a pre-programmed "social" stimulus event.	1. Views social cognition as the subjective reactions of at least two individuals to their interaction experience and as the shared, intersubjective meaning which they jointly construct through their interaction behavior.
2. Is inherently limited to the study of subjective phenomena, in that phenomena can be observed and assessed only at the individual level.	2. Can be used to study both subjective and intersubjective phenomena, in that phenomena can be observed and assessed both at the individual level and at the dyad or group level.
3. Subjects are tested individually, using single-subject designs and data-analytic models that assume that each subject's cognitive responses are statistically independent from those of other subjects.	3. Subjects are tested together, using dyadic or group designs and data-analytic models that assume that each subject's cognitive responses are statistically interdependent with those of the other dyad or group members.
4. The subject can interact only with people (i.e., experimenters or confederates) whose behavior is constrained by an experimental script and ideally does not vary from one subject to the next within the same experimental condition. Mutual influence should, ideally, not occur.	4. The subject can interact with one or more other subjects in a relatively naturalistic way that makes it possible for the behavior of each subject to influence the behavior of every other subject within his or her dyad or group. Mutual influence should occur.
5. The statistical interdependence of the subjects' cognitive responses is typically viewed as an undesirable statistical artifact. Such interdependence, if it cannot be avoided by design, is typically regarded as "nuisance variance" that the researcher must attempt to eliminate or control for in the data analyses.	5. The statistical interdependence of the subjects' cognitive responses is typically viewed with great interest, as potential evidence of an intersubjective phenomenon. The variance associated with this interdependence is therefore regarded as "effect variance," not as "error" or "nuisance variance."

Note. From "Social' Cognition and *Social* Cognition" by W. Ickes and R. Gonzalez, 1996, in J. Nye and A. M. Brower (Eds.), *What's Social about Social Cognition? Research on Socially Shared Cognition in Small Groups* (pp. 304-307). Newbury Park, CA: Sage. Copyright 1996 by Sage Publications, Inc.

Table 2. Hypothesized differences in the perceiver's experience of subjective versus intersubjective social cognition (Ickes, in press).

Subjective Social Cognition	Intersubjective Social Cognition
1. More independent and detached	1. More interdependent and involved
2. More egocentric and attuned to one's own subjective reality (i.e., more solipsistic)	2. More altercentric and attuned to the intersubjective reality
3. Views others in a relatively simplified, stereotypic, and abstract way	3. Views others in a relatively complex, particularistic, and concrete way
4. Views others as being compelled by their own "nature" and attributes to think and act the way that they do	4. Views others as capable of greater self-determination, transcending their own "nature" and attributes to think and act in novel and unexpected ways
5. More susceptible to fantasy and projective bias	5. Less susceptible to fantasy and projective bias
6. Deals with others more as cognitive representations of persons whose own subjectivity can be "constructed" but is not experienced co-actively through the intersubjective exchange	6. Deals with others more as flesh-and-blood persons whose own subjectivity is experienced co-actively through the intersubjective exchange

Note. From "The Social Self in Subjective versus Intersubjective Research Paradigms" by W. Ickes, in press, in J. P. Forgas and K. D. Williams (Eds.), *The Social Self: Cognitive, Interpersonal, and Intergroup Perspectives* (pp. 205-218). Philadelphia: Psychology Press. Copyright 2002 by Psychology Press, Inc.

