'The Inner Citadels of the Color Line': Mapping the Micro-Ecology of Racial Segregation in Everyday Life Spaces

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Abstract

The role of racial segregation in perpetuating racial prejudice and inequality has been widely investigated by social scientists. Most research has concentrated on the macro-sociological organization of institutions of residence, education and employment. In this paper, we suggest that such work may be usefully complemented by research that investigates the so-called 'micro-ecology of segregation' in everyday life spaces – the dynamic, largely informal network of social practices through which individuals maintain racial isolation within settings where members of other race groups are physically co-present. Developing this argument, we discuss some historical examples of research on the micro-ecological dimension of race segregation in the United States. We also draw examples from an ongoing program of work on everyday practices of contact and segregation in post-apartheid South Africa. The paper concludes by exploring some conceptual and methodological implications of treating racial segregation as a micro-ecological practice.

> Segregation was made real for me as a white Northerner when I took a train trip around the US in the summer of 1947 (I was 24). My return from the West Coast was by way of the South West and New Orleans. It was on that leg of the trip that I for the first time saw drinking fountains labeled 'colored' and 'white'. This was not outright cruelty such as lynching or denial of voting rights, all of which I had learned about. It was not silly, as it first seemed to me. I realized that for segregation to stick it had to intrude into the simplest everyday activity such as taking a drink of water. It was that very banality that brought home what it must be like to be colored (Remembering Jim Crow, 2007).

The rationale for studying ethnic and racial segregation is twofold. On one hand, segregation has long been regarded as a lynchpin of material inequality, an idea reinvigorated in the 1990s by the publication of Massey and Denton's

(1993) book on *American Apartheid*. On the other hand, segregation is widely believed to sustain racial intolerance and conflict. Since the early decades of the last century, social psychologists have accumulated a wealth of data on the psychological benefits of racial contact and desegregation, including a reduction in race stereotypes and anxiety, an increase in positive interracial emotions such as liking and empathy, and a heightened tendency to form inclusive identities in which 'they' become 'we' (Brown & Hewstone, 2005; Dovidio, Gaertner & Kawamaki, 2005; Pettigrew & Tropp, 2006).

It is unsettling, then, that informal systems of racial segregation continue to beset social life in many formally integrated societies, including the United States. Displaying a tenacity that belies the implementation of legislation such as the Fair Housing Act (1968) and the Equal Credit Opportunity Act (1974), segregation persists within the residential design of American towns and cities (Adelman & Gocker, 2007). Thwarting the spirit of the Brown versus the Board of Education of Topeka decision, it also persists within the racial composition of schools in many metropolitan areas and districts (Pettigrew, 2004). To say this is not to deny the existence of communities where racial integration has taken root or at least where desegregation has made headway (Ellen, 1998). It is merely to recognize that '... despite all of the money spent and the laws passed during the past three decades, racial segregation remains a firmly rooted feature of our social landscape' (Carr, 1999, 140).

The aim of this paper is not to review the substantial research literature on the global patterning, causes and consequences of segregation. Nor do we seek to unravel its complex implications for understanding the continuing social significance of 'race' in the United States or elsewhere. Rather, we wish to discuss a dimension of segregation whose empirical investigation remains relatively under developed, which arises within the so-called 'micro-ecology' of social relations in everyday spaces such as beaches, parks, cafeterias, public transport, nightclubs, swimming pools and playgrounds.

In one sense, the comparative neglect of this dimension of segregation by social scientists is surprising, for it has often assumed iconic status within societies with a history of *de jure* segregation such as South Africa and the United States. South Africa's apartheid laws were designed not only to govern where citizens could reside, work or attend school. The statutory provisions of so-called 'petty apartheid' also dictated, for example, with whom they could queue in the post office or sit in church or share a kiss (Christopher, 1994). Along similar lines, some of the most reviled legislation introduced during America's Jim Crow era was designed to regulate such mundane practices as buying ice cream, eating lunch, watching movies, drinking from a water fountain, and using public transport (Vann Woodward, 1957). In both societies, then, a complex raft of laws aimed to regulate intimacy between members of different racial groups who were inevitably brought into situations of potential contact in the course of their day-to-day living. To echo our opening quotation, such laws allowed segregation to penetrate even into the most 'banal' of everyday scenes.

The era of state enforced segregation is now over in South Africa and America. The 'whites only' signs are gone, and it is illegal to restrict the free use of everyday spaces and amenities on the basis of race. Nevertheless, in this paper, we wish to argue that the micro-ecology of segregation has endured in the same way that segregation at other scales of social life has endured and that it has social psychological consequences that merit further research. To begin with, we discuss what is meant by the phrase 'micro-ecology of segregation', drawing on historical work conducted in the United States and on a more recent program of work conducted in post-apartheid South Africa (see http://www.contactecology.com/). Looking towards future research, we then outline some theoretical and methodological implications of treating segregation as a micro-ecological phenomenon.

What Is the Micro-Ecology of Segregation?

Michel de Certeau (1984) famously contrasted two views of the city. The first view offers the kind of top-down perspective that city planners and demographers tend to adopt, a perspective that generates abstracted, bird's eye visualizations of urban space. The second view offers a vision of the city from the bottom-up. It prioritizes the situated perspectives and practices of those who walk the streets, encounter and interact with one another and use specific routes, facilities and places. Our interest in the 'micro-ecology of segregation' arose originally as an attempt to move work on segregation somewhat closer to de Certeau's second conception of urban space. When reading the vast research literature on segregation, we were struck by its tendency to represent relations between groups in somewhat global and abstracted terms – terms that effectively depict the 'big picture' of racial distribution and demography, but somewhat eclipse the day-to-day practices, routines and experiences of ordinary people on the ground. However valuable in its own right – and we do not dispute that it has made many vital contributions – such research seemed to under specify relations located at finer levels of 'granularity' in social space.

As an opening example of what we mean by 'the micro-ecology of segregation', consider Davis, Seibert and Breed's (1966) observational study of relations on the New Orleans transport system, which was conducted shortly after the abolition of 'white precedence' laws in public transport. Amongst the most controversial of Jim Crow laws, the edict of white precedence required black passengers on buses and streetcars to sit behind the rearmost white passenger. In practice, this regulation was often facilitated by a portable seat-top sign, labeled 'colored' on one side and 'white' on the other, that could be moved to and fro to accommodate passengers should the front or back regions become crowded. In 1964, some 6 years after the repeal of white precedence laws in New Orleans, Davies et al. conducted a fascinating study of relations on the city's public transit buses. Trained observers made some 87 journeys during the month of May, plotting

passengers' seating locations. Their results indicated that the racialized pattern of white precedence persisted in spite of the removal of its legal foundations. Although so-called 'precedence violation' did occur, by and large the patterns established under Jim Crow were maintained through the informal seating choices of passengers. Blacks tended to sit behind whites, whites in front of blacks, confirming the customary salience of a technically illicit boundary.

Like other forms of segregation, then, micro-ecological segregation involves the production of social spaces that create, maintain and signify racial separation. However, as Davies et al.'s study shows, the processes of social division involved unfold at finer levels of resolution than those generally recognized in segregation research. The micro-ecological dimension, by definition, implicates the scales of social life at which people actually encounter one another as they are brought into relations of sensuous immediacy, proximity and co-presence. Davies et al.'s study illustrates another fundamental characteristic of the micro-ecology of segregation, namely that it is constituted primarily by so-called *macrokinetic* (Haber, 1982) non-verbal behaviors. Whereas microkinetic behaviors involve usage of particular parts of the body (e.g., hand gestures, face expressions), macrokinetic behaviours involve usage of the body as a whole: '... its presence, absence, lateness, ordinality and spatial position in a group.' (Haber, 226). By modulating their bodily placement over time in relation to a (constantly shifting) racial boundary, for instance, Davis et al.'s passengers were able to (re)produce – and sometimes challenge – segregated seating arrangements within the New Orleans transport system.

Of course, if micro-ecological patterns existed only as sets of bodily coordinates and associated spatial patterns, then they would be of limited social psychological interest. However, as we elaborate in subsequent sections of the paper, embodied spaces of division are often also symbolic spaces that convey the meaning of racial categories and the nature of relations between them. By installing a front-back division, for example, the practice of white precedence instructed passengers entering a bus or streetcar about their ideological as well as physical place in the world, with all of the social psychological consequences that this entails (c.f. Grossack, 1956).

Previous Research on Micro-Ecological Processes

There is a rich historical record of the social practices with which we are concerned in this paper, and we have much to learn from perusing this record. Why, for example, was desegregation of swimming pools and beaches so strenuously resisted by local white authorities in the southern states of America in the 1950s, while the desegregation of other public amenities (e.g., tennis courts) occurred more smoothly (see, for e.g., McKay, 1954)? Answers to this kind of question may elucidate the history and politics of racial intimacy, a topic that is certainly relevant to social psychologists.

We are concerned here, however, with empirical studies of micro-ecological practices of segregation in naturalistic environments. Compared with other lines of research on segregation, such studies are few and do not yet amount to a systematic program of work. Even so, they provide a tantalizing glimpse into the patterning of racial contact and isolation in such varied settings as university lecture theatres (Campbell, Kruskal & Wallace, 1966; Haber, 1982; Koen & Durrheim, submitted) and dining areas (Clack, Dixon & Tredoux, 2005; Schrieff, Tredoux, Dixon & Finchilescu, 2005); school playgrounds and cafeterias (Green & Mellow, 1998; McCauley, Plummer, Moskalenko, & Mordkoff, 2001; Schofield & Sagar, 1977; Thomas, 2005), public seating (Tredoux et al., 2005), shopping queues (Kaplan & Fugate, 1972), churches (Parker, 1968), beaches (Durrheim & Dixon, 2005), bars and nightclubs (Tredoux & Dixon, in press), and public transport (Davis et al., 1966). In this section of the paper, we discuss some signal examples of this work, using them to explore further the social psychological implications of micro-ecological processes. We focus on relations in two kinds of social space, viz. educational spaces and spaces of public life and recreation. Moreover, we focus on relations in the United States, where the majority of relevant research has been undertaken, and in South African, where our own program of empirical work is being conducted.

Educational spaces

Educational settings occupy a central position in the history of social science research on racial (de)segregation. For several decades, the integration of students in schools and colleges has been widely commended as a promising means of engineering a fairer and more tolerant society. In America, this idea was famously elaborated in the amicus curiae that social scientists submitted in the Brown versus the Board of Education of Topeka case, which heralded the end of the 'separate but equal' doctrine of segregation and inspired a subsequent outpouring of research on the effects of educational contact on students' racial attitudes and intergroup relations (e.g., Moody, 2001; Schofield, 1986; Schofield and Eurich-Fulcer, 2001; Stephan, 1978).

Of course, in order to have interracial contact, students must first come to share common spaces of learning, recreation and friendship; that is to say, the human geography of their educational experience must afford them the opportunity for interaction across racial lines. Research measuring this 'opportunity' has generally examined the global evenness of racial distribution across schools in districts (e.g., Saporito & Sohoni, 2006). Less commonly, it has examined internal distributions across classrooms within schools (e.g., Clotfelter, Ladd & Vigdor, 2002), exploring, for example, how race segregation may result from policies of academic 'streaming' or 'tracking'.

Micro-ecological work on segregation suggests that racial partitioning emerges at finer levels still, regulating the extent of cross-racial interaction

within contexts that may initially seem to be integrated. In what remains one of the most methodologically rigorous studies, Schofield and Sagar (1977) investigated relations in student cafeterias, examining seventh and eighth graders' use of space in the dining area of a 'magnet' school in a Northern city in the United States. Their study ran for a period of 17 weeks and focused on the observation of side-by-side and face-to-face seating patterns. Using an 'adjacency' index devised by Campbell, Kruskal and Wallace (1966), Schofield and Sagar found that same-race seating adjacencies were more common than would be expected under conditions of random mixing. They also that found grade-specific changes in such patterns emerged over the study period. In the eighth grade sample, seating segregation increased over time, whereas in the seventh grade sample, it decreased. Interpretation of such patterns is inevitably difficult in a naturalistic study of this kind. However, it is worth noting that the older but not the younger cohort in this study was part of an academic 'tracking' program, which had created race segregation at the level of the classroom. Thus, the evolution of seating patterns in the cafeteria may have reflected the effects of wider, grade-specific practices of racial stratification.

Schofield and Sagar's research focused on relations at the scale of seating adjacencies. In other studies, segregation has also emerged at broader levels of territorial organization. Consider, for instance, the ecological pattern mapped by Schrieff et al. (2005) in a study of the social organization of two university dining halls in post-apartheid South Africa during evening meal times, which involved mapping the seating positions of some 5299 black and 1339 white diners over 50 observational intervals. Each night, white and black students would come together in one of two dining rooms located associated with students' hall of residence. In this sense, they would share common eating spaces. However, at other levels of social reality, they would dine in isolation. Not only would they generally sit at different tables, opposite and adjacent to students of the same race, but also they would routinely cluster in different sections of the dining halls, with white students disproportionately occupying some regions and black students others (see Figure 1 below). Schrieff et al. argued that the latter ecological arrangement did not result from simple friendship patterns. Rather, it reflected a broader territorial consciousness on the part of diners, leading them to gravitate towards racial 'comfort zones'.

Schofield and Sagar (1977) and Schrieff et al. (2005) capture patterns found in other observational research in educational settings, which has identified routine and pervasive practices of segregation within activities such as eating, sitting, playing and even walking between classes (e.g., see Clack, et al., 2005; Gottdeiner & Malone, 1985; McCauley et al., 2001; Schrieff et al.; Silverman & Shaw, 1973). If one were to use such evidence to reconstruct the 'time–geography' (cf. Pred, 1977) of a typical student's racial encounters over the course of a typical day at a typical school, we suspect that a somewhat disheartening picture would emerge, even in

Figure 1 Seating patterns in a multiracial dining hall in South Africa.
Note: The seating positions of black diners are indicated by the black dots, white diners by the grey dots. Schrieff et al.'s (2005) analysis of 50 such maps suggested that racial segregation emerged not only at the level of tables and seating adjacencies, but also via an 'uneven' distribution by race across the 'left' and 'right' hand sides of the dining hall.

contexts where a more equitable inclusion of ethnic or racial groups has been achieved at an institutional level.

To be sure, one must be careful to acknowledge variability within and between educational settings. In studies of relations in cafeterias, for example, factors such as local racial proportions, density of occupancy, gender of interactants, institutional norms, the public or private nature of the school setting and the degree of 'knittedness' of table groupings have all been shown to affect the form and extent of racial isolation (see, e.g., Clack et al., 2005; Greene & Mellow, 1998; Zisman & Wilson, 1992). Moreover, generally speaking, segregation is more extensive in the 'backstage' areas of educational settings (Zisman & Wilson), where students can engage in voluntary interactions free from official vigilance or intervention, than it is in more formal settings such as the classroom and the lecture theatre.

Even within the latter contexts, however, micro-ecological divisions may emerge, particularly if students can exercise some degree of choice in their use of social space. Gilda Haber (1982) provided a particularly striking illustration in her research on spatial relations in college lectures theatres in the United States. With the assistance of trained observers, she constructed a time series of maps of seating positions occupied by members of various social categories in six classes. Amongst other patterns, she located a micro-ecological

formation based around the occupancy of 'central' versus 'peripheral' locations in the lecture room, which seemed to be organized along ethnic and racial lines:

> ... marginals place themselves on the spatial peripheries of a group and dominants more often in the spatial centre. These separate spatial entities form concentric circles, with the inner circle composed of whites. Two distinct minorities, blacks and orientals, radiate outwards in two concentric circles around the whites. The outer circles also contain other minority groups such as first and second generation Jews, Catholics, and first generation foreigners. (Haber, 1982, 226).

Interpreting this pattern, Haber suggested that spatial and social configurations are often mutually reinforcing. The racial patterning of central and marginal spaces in lectures may thus reveal how power relations and degree of integration both structures and reflects students' sense of their proper 'place' within educational institutions. It is perhaps especially revealing that white students' occupied the centre stage in Haber's study even in contexts where they were a numeric minority. Like the front and back regions of Davis et al.'s (1966) buses, the central-marginal dichotomy seemed to signify the deeper meanings of racial categories and the nature of relations between them.

Public and recreational spaces

Research in educational settings undoubtedly represents the most prolific source of examples of work on the micro-ecology of contact and segregation, but hardly exhausts the range of contexts of investigation. Outside of formal institutions of residence, employment and education lies a panoply of 'everyday life spaces' (Schnell & Yoav, 2001) of potential racial encounter about which we know fairly little: the spaces of leisure, consumption, fleeting encounter and public life. What we do know is that the composition of small groups in public settings often tends towards racial homogeneity, as evinced, for example, by Mayhew, McPherson, Rotolo and Smith-Lovin's (1995) heroic 3-year study of over 100,000 such groups in two communities in South Carolina. However, the micro-spatial patterning of racial contact and isolation in such settings is still a relatively under-researched topic.

Dixon and Durrheim's (2003) study of changing relations on a South African beach is an exception. In the apartheid era, beaches in South Africa were designated along racial lines, and it was illegal for beachgoers to sunbathe, swim or even visit a beach set aside for members of another race group. In the post-apartheid era, a desegregation of leisure spaces occurred, with the result that mixed-race beaches became the norm. As Dixon and Durrheim's observations on one such beach on the KwaZulu-Natal coastline illustrates, however, country-wide processes of desegregation continue to be offset by processes of re-segregation on beaches themselves.

Their analysis was built around a series of 99 maps, constructed during the peak holiday seasons in 1999 and 2001 by a team of observers (Durrheim

Figure 2   The ecology of race on a beachfront in post-apartheid South Africa.
Note: This figure is based on one of maps constructed by Durrheim and Dixon (2005) and captured relations on the morning of December 28, 1999. Locations of White occupants are indicated in blue, Black occupants in red, Indian occupants in yellow and Coloured occupants in orange.

& Dixon, 2005). As Figure 2 shows, these maps revealed stark patterns of racial isolation within so-called 'umbrella spaces' (intimate groups sharing a micro-territorial unit) as well as within broader patterns of clustering and dispersal. In a process reminiscent of the invasion–succession sequences tracked in studies of residential organization, segregation also occurred via the temporal choreography of relations on the beachfront. White holiday makers left areas of the beachfront that became densely populated with black holiday makers and, at certain critical times, vacated the beach entirely. The latter finding shows how micro-ecological patterns of segregation exist not only as stable, already formed system of boundaries. They typically result from transient and highly dynamic practices of entry, assembly, occupancy, movement and exit within a given locale. As we shall outline presently, capturing the fluid (re)production of the kind of everyday space depicted in Figure 2 poses significant methodological challenges.

    As a final example, we wish to consider relations in contexts that are so mundane that it is easy to overlook their social psychological significance

entirely, namely the spaces in which we (wait to) use public amenities such as phones, ticket offices, checkout tills and water fountains. The queue is perhaps the quintessential micro-space of human interaction: it quite literally allows social order to emerge out of the chaos of self-seeking individuals and thus embodies the intimate relationship between society, space and social relations. A few studies have also found that our behavior whilst queuing for, or making use of, public amenities may also be subtly shaped by racial factors.

Kaplan and Fugate (1972) studied relations in supermarkets in two American cities and reported that customers tended to avoid queuing behind a person of another race group. They also found that this practice was subject to variation across cities, being conducted by whites only in Richmond but by both black and whites in Cincinnati. Ruback and Snow (1993) used a combination of naturalistic observation and quasi-experimentation to explore the interrelations between race and reactions to various forms of 'intrusion' at a water fountain. From a complex set of results, two findings can be flagged. First, people waiting to use the water fountain tended to delay longer before 'intruding' upon a drinker of another race group than they did before intruding on a drinker of their own race group. Second, and perhaps more revealing, reactions to 'intrusion' were also racially patterned, with drinkers lingering longer at the water fountain in response to cross-race than to a same-race intrusion. Ruback and Snow suggested that the latter 'delay' expressed a form 'non-conscious racism', manifested via territorial resistance to ceding the water fountain. This claim raises the challenge of explaining the micro-ecological practices described in this section of the paper.

Explaining Micro-Ecological Patterns of Segregation

Attempts to explain segregation have been dogged by its over-determination by a wide range of factors (e.g., institutional, legal, economic, political and psychological), which has left researchers with the unenviable task of untangling multiple sufficient causes and multiple possible causal pathways. Because research on micro-ecological processes concentrates on situations where group members are physically co-present, relatively unaffected by structural or economic restraints, and free to occupy social space as they see fit, it brings into sharper focus the 'preferential' dimension of segregation. It thus flags the necessity of analysis at a social psychological level. Unfortunately, to our knowledge, no one has yet developed a systematic account of why micro-ecological varieties of racial isolation develop, why they take the geographic and temporal forms they do, and with what consequences. In this section, therefore, we will simply mention what we view as some promising theoretical avenues.

Race prejudice

Initial bearings might be taken from general theories of race attitudes and stereotyping, which have been applied within research on other forms of

segregation (e.g., see Farley et al., 1994). For example, Campbell et al. (1966) argued that seating adjacencies may sometimes be a proxy for the 'fears and dislikes' (p. 8) of both whites and blacks. Indirectly supporting this interpretation, they cited evidence that seating was less strongly aggregated by race in a 'liberal' than in a 'traditional' college environment. This line of explanation fits with wider research on the affective processes that lead people to avoid interracial contact, including aversive racism, anxiety and others forms of negative affect (e.g., Dovidio, Esses, Beach & Gaertner, 2002; Hendricks & Bootzin, 1976; Stephan & Stephan, 1985). It also fits with work on implicit prejudice, which has sometimes taken spatial distance as an index of unconscious prejudice (e.g., Amodio & Devine, 2006, study 3). Indeed, it seems plausible to us that many micro-ecological patterns result from motivations that are enacted habitually and without much conscious deliberation.

Social categorization and differentiation

A related line of enquiry might emphasize the role of micro-spatial arrangements in expressing (and maintaining) category boundaries and relations. In an innovative extension of the minimal group paradigm, for example, Novelli, Drury and Reicher (unpublished) explored the impact of social categorization on self-selected seating distance. Participants in their study were led to believe that they would shortly be interacting with a fellow ingroup member, an outgroup member or simply another individual; and then invited to arrange seating in the experiment's venue so as to be 'comfortable'. As predicted, seating distances were closer in the intragroup context ($M = 38$ inches) than in the intergroup context ($M = 48$ inches), arguably affirming the shared identity of members in the former. In addition, this effect was moderated by the degree of perceived differentiation between self and other. For example, in the intergroup condition, seating distances increased when participants expected to interact with an outgroup member who was more 'different to self'. One must obviously be careful about extrapolating from laboratory research based on simple measures of physical distance to more complex, naturally occurring patterns of micro-segregation. Even so, Novelli et al.'s study indicates how subtle modulations in the arrangement of intimate spaces may express the dynamics of social categorization and differentiation, even when the categories involved are of 'minimal' relevance to participants.

Correspondingly, experimental evidence shows how the manipulation of space may make particular forms of social categorization more or less salient to participants. In some laboratory studies, for instance, researchers have manipulated category relations by organizing social space in ways that lead participants to perceive themselves as individuals, as members of different social groups, or as members of a superordinate group (e.g., Gaertner, Mann, Murrell, & Dovidio, 1989). Although this work has not focused on

micro–ecological practices per se, it does illustrate how spatial arrangements impact on social perception and classification.

Racial meta-perceptions

A third theoretical avenue might build on emerging work on racial meta-perceptions (i.e., perceptions that members of one race group has about how members of another group view or relate to them). The research program of Nicole Shelton and Jennifer Richeson is particularly instructive in this context, for it has directly explored the role of such perceptions in shaping racial avoidance and in structuring beliefs about the causes of segregation (see Shelton & Richeson, 2006 for a comprehensive review). Among other themes, this work has shown that racial avoidance occurs not only because people dislike one another, but also because they worry about how they will be perceived by members of other groups (see also Finchilescu, 2005). For example, whites are often uncomfortable at the prospect of being perceived as 'racist' during interracial encounters and this may partly explain why they tend to avoid them.

Moreover, Shelton and Richeson (2005) aver that whites and blacks tend to make parallel but divergent attributions about the causes of racial segregation. In a study that resonates with work on segregated lunchrooms, for instance, they asked participants to imagine the following scenario:

> You are entering a dining hall for dinner. You are alone because your close friends are in a review session. As you look around the dining hall for a place to sit, you notice several (White/Black) students who live near you sitting together. These students notice you. However, neither of you explicitly makes a move to sit together.

Around half of Shelton and Richeson's black and white participants were asked to imagine that the seated group of students mentioned in this scenario were white, the rest that the group was black. They were then asked about the motivations that could explain their own and the group's failure to initiate racial contact in this scenario. The results showed a marked self-other bias in the attributions provided. Whites attributed their avoidance of contact with blacks to a fear of rejection more than a lack of interest in cross-racial interaction; however, they attributed black avoidance to a lack of interest more than a fear of rejection. For blacks, the pattern worked in the reverse direction; that is, lack of interest was viewed as a more probable explanation of white avoidance than black avoidance of racial contact. In short, attributions about causes of racial avoidance followed a classic pattern of pluralistic ignorance, showing how a meta–cognitive perspective might enrich our understanding of the beliefs that (re)produce segregated social spaces.

Explanations grounded in general theories of prejudice, categorization and meta–perception may help clarify why segregated social spaces are

reproduced. By the same token, we believe that such explanations must be complemented by theoretical work that addresses more directly the defining feature of the micro-ecology of segregation (i.e., its *spatiality*). In order to accomplish this goal, however, we must move beyond the conception of spatiality that tends to dominate social psychology, which treats human geography as a mere expression of social and psychological processes or, worse, as a empty stage on which such processes are played out (c.f. Dixon, 2001; Paulus & Nagar, 1987). We must recognize how everyday spaces are not only racially constituted but also *constitutive of* 'race relations'.

Thomas (2005) has addressed this theme in a study on the spatiality of racial interaction in a US high school. She holds that seemingly banal processes of 'bodily placement' in settings such as lunch canteens should not be regarded as passive reflections of already formed racial identities. To the contrary, such placements actively *perform*, constitute and stabilize such identities, rendering them visible and salient to students. Moreover, she argues, the social spaces produced by bodily practices often acquire a historical and normative force in their own right. Ironically, micro-ecological systems that emerge via seemingly voluntary practices of self-segregation in turn constrain what is accepted as 'normal' or 'natural' behavior within a given locale.

Analogously, the micro-ecological patterns identified by Davis et al. (1966) in public transport and Haber (1982) in university lecture theatres, which were discussed in the previous section, can be reinterpreted as more than mere reflections of already formed relations of power, status and difference. Such patterns may also illustrate how racial hierarchy is established *via* its inscription within the ordinary environments in which we encounter and relate to one another. In other words, the study of micro-ecological processes draws social psychologists inexorably towards the kind of dynamic and trans-actional conception of human-environment relations that distinguishes research in fields such as environmental psychology and human geography, with all of the methodological challenges that this poses.

Methodological Challenges and Directions

The majority of research on segregation has relied on census data that captures the distribution of members of different racial populations within and between different areas of a defined space (e.g., residential zones in a city, occupational strata, schools in a district). The first methodological challenge facing researchers wishing to study micro-ecological processes is that such data are seldom available and cannot easily be constructed using standard census-taking techniques. A second problem is that micro-ecological relations tend to be highly dynamic, transient, messy and difficult to 'pin down', being formed and reformed as people enter, occupy, move through and depart a given setting. Thus, discussing the problems posed

by investigating relations in school cafeterias one research team has spoken of the 'nightmare of fluidity' (Zisman & Wilson, 1992). We know well what they mean! The challenge for researchers is to devise methodological techniques that capture the changeability and complexity of spatial relations within everyday life spaces and unravel what such relations tell us about intergroup processes.

   The 'micro-ecology of segregation project' has brought together a team of researchers, including the authors of this paper, who have attempted to address this problem, working mainly in settings in post-apartheid South Africa. A central aim of this project has been to try out different methodological strategies, three of which we outline below. For more extensive discussion, the reader is referred to the project website, which contains details of relevant publications, a bibliography, and some software developed to facilitate empirical work on micro-ecological dynamics of contact and segregation (see http://www.contactecology.com).

Digital imaging

An obvious approach to managing the complexity of micro-ecological processes might exploit digital imaging technology, as illustrated by the work of Koen and Durrheim (submitted) in university lecture theatres and Tredoux et al. (2005) in public seating areas. Tredoux et al. (2005), for instance, produced a time series ($n = 300$) of photographs of relations on a tiered system of public steps (see Figure 3 below). They reported that

Figure 3   Using digital imaging to capture the racial ecology of relations in public space.
Note: Taken from Tredoux et al. (2005). The camera displayed here was set to take one frame every 30 s. Subsequent analyses focused on patterns of entry, occupancy and exit on the shaded tiers of steps.

members of different race categories preferred to occupy different regions of the steps and that this pattern recurred across observational intervals, but varied according to local population density on the steps (lower density tended to produce higher segregation). Frame-by-frame analysis of patterns of entry over time also suggested that this pattern was driven primarily by the seating choices made by whites rather than by blacks.

The latter finding illustrates the main advantage of digital imaging in this context. Not only does it create a permanent, accurate record of the ecological relations for the purposes of subsequent coding, but also it enables exploration of the dynamic emergence of segregation. In the steps context, Tredoux et al. found that a frame periodicity of 30 s was sufficient to produce a fine-grained record of patterns of stability and change on the steps, opening up the possibility of analysis of temporal *process* at both a molecular and molar level.

The practical disadvantages of digital imaging techniques should also be noted however. Although it is an efficient method for collecting data, the subsequent coding for analysis (e.g., marking race and gender membership of people photographed in public spaces) is time-consuming, even when using bespoke software (for further details, see Tredoux et al., 2005). In addition, the use of digital imaging is unethical or impractical in many situations, limiting its general utility as an approach to studying micro-ecological processes.

Mapping

Maps have been used in several studies reviewed in this paper (e.g., Campbell et al., 1966; Davis et al., 1966; Dixon & Durrheim, 2003; Haber, 1982) and, in our view, represent the most flexible and straightforward approach to studying the micro-ecology of segregation (see, for example, the appendix of Durrheim & Dixon's (2005) book for a step-by-step outline of one form of mapping). They allow us to create simple, relatively accurate and reliable records of social relations over time, avoiding some of the ethical problems posed by digital imaging (e.g., maps do not usually encode information that identifies an individual). Unlike many other observational techniques, they also allow us to create a record of the *human geography* of race relations, thus capturing the defining feature of micro-ecological processes.

Mapping techniques are useful in two additional senses. First, they provide a useful means of visualizing the qualitative form that segregation assumes in a given context, as many studies of urban segregation have illustrated. Second, maps can be used to tap individuals' own constructions of social space, thereby providing insight into how participants themselves perceive and evaluate the everyday ecology of their relations with others. In a simple but poignant illustration, Holmes (1995) had school children draw a picture of themselves and others in the classroom and found that, revealingly, they positioned members of other racial groups slightly further away from self

than members of the own racial group. Likewise, Clack (unpublished) had children in a mixed racial school in Johannesburg in South Africa locate themselves, their immediate friendship circle, and other social groups 'on a typical day' on a map of the school playground. Analysis of the drawings showed considerable variation across individuals in their perception of racial isolation. For instance, children who reported higher levels of personal interracial contact tended to draw the playground as a less segregated space.

In short, mapping techniques provide a flexible methodology for studying micro-ecological dynamics, and in our experience, are particularly useful when used in conjunction with evidence that directly illuminates participants' understandings of micro-ecological processes. Durrheim and Dixon (2005), for instance, used follow-up interviews to explore beachgoer's own interpretations of racial patterns of clustering and withdrawal on their South Africa beachfront. They found that beachgoers of different race groups employed different kinds of 'working models' of contact to explain the persistence of racial divisions. In a pattern reminiscent of the divergent attributions located by Shelton and Richeson (2005), blacks constructed segregation primarily as the outcome of white racism and white flight, whereas whites constructed segregation as the result of a black 'invasion' and 'crowding', resulting in a 'displacement' of whites from the beachfront. In our view, this kind of analysis of ordinary accounts of racial boundaries or patterns of avoidance is a vital complement to other forms of data analysis (e.g., see Buttny, 1999; Whitehead & Wittig, 2005). As Foster (2005, 503) points out, 'While it is important to collect data on bodies in space-time, it is equally important to hear their voices and their interpretations of lived experience.'

Quasi experimentation and the 'breaching' of ecological norms in naturalistic settings

Another technique takes its bearings from work in human geography and proxemics, which has used transgression as a methodological resource to explore normative, often tacit, assumptions about how social space should be arranged. As Hall (1968) once observed, it can be highly instructive to record how people respond to a 'breach in spatial ettiquette' (p. 88). On one hand, researchers might seek out naturalistic situations where the usual order of racial isolation has been abruptly altered or inverted and where participants are thus forced to make sense of, and react, to a realignment of the usual boundaries. On the other hand, it may be both possible to intervene systematically within everyday social spaces in order to clarify the social psychological principles that govern micro-ecological processes of contact and segregation. Just as work on personal space has engineered various, imaginative forms of encroachment upon personal space, often using quasi-experimental techniques, so the infiltration of racially demarcated
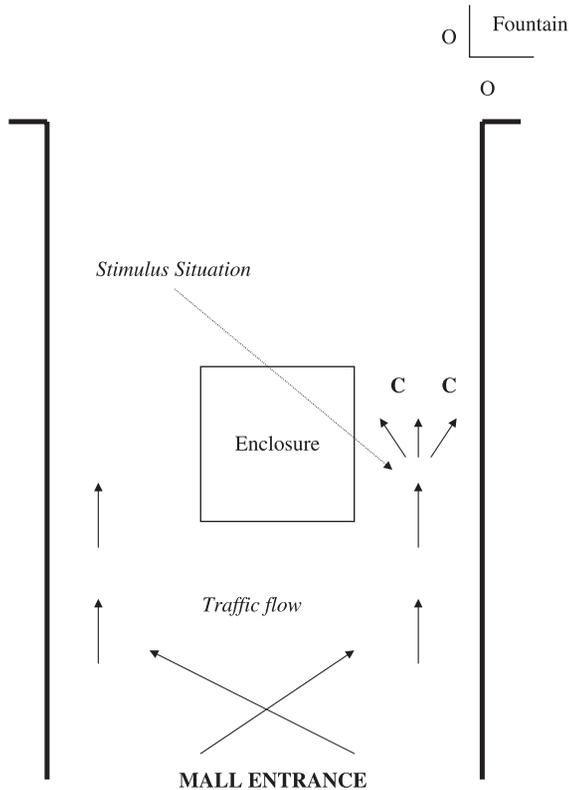
Figure 4   Shared space invasion paradigm installed in a suburban shopping mall.
Note: Observers (O) recorded whether or not incoming shoppers walked through or around conversing black, white or mixed race pairs of male confederates (C).

spaces may tell us about the nature and meaning of racial boundaries (e.g., see Alexander, 2007).

Conversely, quasi-experimental interventions may help to explore the conditions under which racial boundaries are breached, why and by whom. In an inventive study, Brown (1981) engineered the situation represented in Figure 4 above in a suburban shopping male in West Central Ohio in the United States. Dyadic groups of male confederates of varying racial compositions (black–black, white–white, and black–white) were strategically placed in the thoroughfare indicated and the behavior of approaching shoppers observed by two other confederates standing behind the fountain. Brown found that shoppers were more likely to walk through (rather than around) the black dyad than through either the white or mixed race dyad, arguably showing less respect for the black dyad's shared space. He thus recommended the 'invasion of shared space' paradigm as a useful and unobtrusive method for studying the subtle effects of racial attitudes.

Conclusions

If we view segregation as a phenomenon established solely within global institutions of housing, employment and education, then we can safely limit our attention to events unfolding at a relatively macro-scale. If, however, we accept that segregation can manifest at varying levels in a social system, and that relations at one level are not necessarily isomorphic with relations at another, then we cannot afford to neglect relations unfolding at more intimate scales of social life. This is particularly important if we want to appreciate fully processes of stability and change in racial relations. After all, to adapt Blumer's (1965) metaphor, the 'color line' may assume manifold and shifting forms. Its outer 'bastions' may be breached only for its 'inner citadels' to hold fast. As such, understanding how the racial order evolves requires that we gather evidence relevant to processes located at varying scales of analysis.

This brief paper has reviewed empirical work on the so-called 'micro-ecology of segregation' and outlined some theoretical and methodological considerations that may inform (and hopefully stimulate) future research. We accept that the micro versus macro dualism lying at the heart of our paper is a simplification. We have employed it primarily as a heuristic device; that is, as a way of bringing into sharper focus a neglected order of social relations, an order lying beneath the grand contours of the 'prismatic metropolis' and within its nooks and crannies.

Our discussion has been limited in several respects. First, we have focused on relations in the United States and South Africa, leaving unanswered the question of how, if at all, micro-ecological practices of division unfold in other societies. In part, this limitation reflects the paucity of available research outside of the United States, and in part it reflects the specific cultural and historical framework of our own empirical work (which has mainly explored how the abolition of apartheid laws is shaping everyday interactions in post-apartheid South Africa). Second, in taking white-black relations as a paradigm case, we have simplified the *multi*racial realities of social life many societies. In the process, we have overlooked the complex intersections between 'race' and categories such as ethnicity, class, gender and sexuality in the production of segregated spaces.

A final limitation concerns the concept of 'race' employed in studies of micro-ecological processes. Much of the work discussed in this review – including our own work – is arguably in danger of essentialising 'race' categories by treating them as a pre-given or even 'natural' basis for organizing everyday relations. We cannot unpack the complexities of this issue here (see Dixon & Tredoux, 2006 for further discussion). Suffice it to say that we believe the process of mapping 'racial ecologies' is complicated by a fundamental tension. On one hand, it requires us to accord, however provisionally, 'race' with a certain reality as an organizing force in the world, which can be traced via observations of local patterns of assembly, movement,

association, and so on. On the other hand, we must always remember that the 'reality' of race is a *product* as much as a *cause* of the discursive and material actions that (re)produce segregation. As Sundstrom (2003, 83) notes, '... when we divide spatially, we cannot help but to inscribe and produce the categories and identities associated with our spatial divisions; with racialized spaces come race'. In addition, of course, micro-ecological patterns *become* racialised precisely because they are constructed as such by participants themselves, often being adduced, for example, as concrete evidence of the immutability of racial boundaries. It is all the more important, then, that observational work on embodied practices of encounter and division is complemented by work that explores how such practices interpreted, warranted and challenged by ordinary people (e.g., see Buttny, 1999; Durrheim & Dixon, 2005; Thomas, 2005; Whitehead & Wittig, 2005).

There are many other methodological and theoretical challenges facing researchers wishing to investigate micro-ecological dynamics. Methodologically, there is a need to develop techniques to capture the (re)production and transformation of socio-spatial systems that are extraordinarily fluid, transient and complex. An interdisciplinary imagination will prove vital here, for we have much to learn from the methodological frameworks devised by urban sociologists and geographers, among others. We would direct readers, for example, to the rich technical literature on the measurement of different forms of segregation (see Massey & Denton, 1988; Massey, White, & Phua, 1996), which provides invaluable guidance about tapping dimensions of segregation such as evenness, isolation, exposure and clustering (for illustrative applications, see Dixon & Durrheim, 2003; Greene & Mellow, 1998; McCauley et al., 2001). Theoretically, too, there is a need to integrate social psychological explanations with explanations drawn from companion disciplines such as human geography and environmental psychology. Work on proxemics, territoriality and boundary processes seems particularly relevant in this regard.

Perhaps above all else, the micro-ecology of segregation exemplifies how the meaning of racial categories and the nature of relations between them is constantly being expressed within, and constituted by, mundane spatial practices. We are convinced that much of the grip that 'race' continues to exercise over the social imagination in many societies derives from its ceaseless embodiment within the geographies of everyday life. By implication, then, exploring when, how, why and by whom racial ecologies are transgressed emerges as a critical topic of research. Although the present review has focused mainly on the (re)production of segregation, we certainly do not view this as an inevitable or necessary outcome. Indeed, following Houston et al. (2005), we would call for future work to explore so-called 'spaces of possibility', where the usual patterns of distance and division are challenged, reduced or even inverted. Such research may locate points at which the 'inner citadels of the color line' are crumbling

and where, perhaps, the very meanings of 'race' and 'race relations' are being renegotiated.

Short Biographies

John Dixon works at the interface between social psychology and human geography and has a particular interest in the dynamics racial contact, conflict, desegregation, and (re)segregation. His work has appeared in journals such as *American Psychologist*, *Psychological Science*, the *British Journal of Social Psychology*, *Discourse and Society*, *Political Psychology*, *Theory and Psychology*, and *the Journal of Environmental Psychology*. He has recently published a book (co-authored with Kevin Durrheim) on the *Social Psychology of Contact and Desegregation* (Routledge). Dixon holds undergraduate and Masters degrees in psychology from the University of Cape Town, South Africa and a PhD in psychology from the University of Exeter, UK. He is a currently a Senior Lecturer in Social Psychology at Lancaster University, UK and also acts as an associate editor of the *British Journal of Social Psychology*.

Colin Tredoux is Professor, and Head of Psychology, at the University of Cape Town, South Africa. His interests in Social Psychology include contact theory and the micro-ecology of contact and segregation. He has published in a range of journals, including *American Psychologist*, *South African Journal of Psychology*, and *Psychological Science*. He is co-editor of a 2008 Blackwell monograph (with Wagner, Tropp and Finchilescu), 'Improving intergroup relations', and is guest co-editor of a forthcoming special issue of the Journal of Social Issues. His collaborative work on the micro-ecology of contact, with John Dixon, Kevin Durrheim, and colleagues, is described in detail at www.contactecology.com.

Kevin Durrheim is Professor of Psychology at the University of KwaZulu-Natal, where he teaches social psychology and research methods, and manages a masters program in applied research. He obtained his PhD in political psychology from the University of Cape Town in 1995. Since then he has published more than 80 peer reviewed articles and book chapters on topics related to racism, segregation and social change. He is co-author (with John Dixon) of *Racial Encounter* (2005, Routledge) and co-editor (with Martin Terre Blanche) of *Research in Practice* (1999, 2006, UCT Press) and (with Colin Tredoux) *Numbers, Hypotheses and Conclusions* (2002, UCT Press).

Gillian Finchilescu is currently Chair in the Psychology Department, University of the Witwatersrand, South Africa. She received her first degrees from the University of Cape Town and her D. Phil. from Oxford University. Her research interests are in the broad field of intergroup relations. Gillian Finchilescu has published in a number of international and local accredited journals on issues such as intergroup contact, race and gender prejudice, socio-political orientations of adolescents in times of rapid social change, HIV and stigma and sexual harassment and violence.

Beverley Clack currently works for Lancashire Care, an NHS Foundation Trust, and is interested in the impact of 'race' and 'ethnicity' on aspects of everyday living. Her PhD, awarded in 2007, developed a social psychological analysis of processes of contact and desegregation in a multiracial school in post apartheid South Africa. She has published several related articles and helped to develop software packages for analysing the micro–ecological dimensions of segregation.

Acknowledgments

Endnote

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References

Adelman, R. M., & Gocker, J. C. (2007). Racial segregation in urban America. *Sociology Compass*, **1**, 404−423.

Alexander, L. (2007). Invading pure space: Disrupting 'black' and 'white' racially homogenized spaces. *South African Journal of Psychology*, **37**, 738−754.

Amodio, D. M., & Devine, P. G. (2006). Stereotyping and evaluation in implicit race bias: Evidence for independent constructs and unique effects on behavior. *Journal of Personality and Social Psychology*, **91**, 652−661.

Blumer, H. (1965). The future of the color line. In S. M. Lyman & A. J. Vidich (Eds.), *Selected Works of Herbert Blumer* (pp. 183−195). Chicago, IL: University of Illinois Press.

Brown, C. E. (1981). Shared space invasion and race. *Personality and Social Psychology Bulletin*, **7**, 103−108.

Brown, R. J., & Hewstone, M. (2005). An integrative theory of intergroup contact. *Advances in Experimental Social Psychology*, **37**, 255−343.

Buttny, R. (1999). Discursive constructions of racial boundaries and self-segregation on campus. *Journal of Language and Social Psychology*, **18**, 247−268.

Campbell, D. T., Kruskal, W. H., & Wallace, W. P. (1966). Seating aggregation as an index of attitude. *Sociometry*, **29**, 1−15.

Carr, J. H. (1999). The complexity of segregation: Why it continues 30 years after the enactment of the Fair Housing Act. *Cityscape*, **4**, 139−146.

Christopher, A. J. (1994). *The Atlas of Apartheid*. London, UK: Routledge.

Clack, B. (2007). *Racial contact and segregation in a postapartheid South African school*. Unpublished PhD thesis. Lancaster University.

Clack, B., Dixon, J. A., & Tredoux, C. (2005). Eating together apart: Patterns of segregation in a multiethnic cafeteria. *Journal of Community and Applied Social Psychology*, **14**, 1−16.

Clotfelter, C. T., Ladd, H. F., & Vigdor, J. (2002). Segregation and resegregation in North Carolina's public school classrooms. *Working Papers Series SAN02–03, Terry Sanford Institute of Public Policy*. Durham, NC: Duke University.

Davis, M., Seibert, R., & Breed, W. (1966). Interracial seating patterns on New Orleans public transit. *Social Problems*, **13**, 298−306.

de Certeau, M. (1984). *The Practice of Everyday Life*. Berkeley, CA: University of California Press.

Dixon, J. A., & Tredoux, C. (2006). Off space and on the sidelines: A response to Marx and Feltham-King. *South African Journal of Psychology*, **36**, 453–457.

Dixon, J. A. (2001). Contact and boundaries: 'Locating' the social psychology of intergroup relations. *Theory and Psychology*, **11**, 587–608.

Dixon, J. A., & Durrheim, K. (2003). Contact and the ecology of racial division: Some varieties of informal segregation. *British Journal of Social Psychology*, **42**, 1–23.

Dovidio, J. F., Esses, V. M., Beach, K. R., & Gaertner, S. (2002). The role of affect in determining intergroup behavior: The case of willingness to engage in intergroup contact. In D. M. Mackie & E. R. Smith (Eds.), *From Prejudice to Intergroup Emotions: Differentiated Reactions to Social Groups* (pp. 153–171). Philadelphia, PA: Psychology Press.

Dovidio, J., Gaertner, S., & Kawamaki, K. (2003). Intergroup contact: The past, present and the future. *Group Processes and Intergroup Relations*, **6**, 5–20.

Durrheim, K., & Dixon, J. A. (2005). *Racial Encounter: The Social Psychology of Desegregation*. London, UK: Routledge.

Ellen, I. G. (1998). Stable racial integration in the contemporary United States: An empirical overview. *Journal of Urban Affairs*, **20**, 27–42.

Farley, R., Steeh, C., Krysan, M., Jackson, T., & Reeves, K. (1994). Stereotypes and segregation: Neighborhoods in the Detroit Area. *American Journal of Sociology*, **100**, 750–780.

Finchilescu, G. (2005). Metastereotypes may hinder inter-racial contact. *South African Journal of Psychology*, **35**, 460–472.

Foster, D. H. (2005). Racialisation and the micro-ecology of contact. *South African Journal of Psychology*, **35**, 494–504.

Gaertner, S. L., Mann, J., Murrell, A., & Dovidio, J. F. (1989). Reducing intergroup bias: The benefits of recategorization. *Journal of Personality and Social Psychology*, **57**, 239–249.

Gottdeiner, M., & Malone, D. (1985). Group differentiation in a metropolitan high school: The influence of race, class, gender and culture. *Qualitative Sociology*, **8**, 29–41.

Green, J. P., & Mellow, N. (1998). Integration where it counts: A study of racial integration in public and private school lunchrooms. Paper presented at the American Political Science Association Meeting. Boston.

Grossack, M. M. (1956). Psychological effects of segregation on buses. *Journal of Negro Education*, **25**, 71–74.

Haber, G. M. (1982). Spatial relations between dominants and marginals. *Social Psychology Quarterly*, **45**, 219–228.

Hall, E. T. (1968). Proxemics. *Current Anthropology*, **9**, 83–108.

Hendricks, M., & Bootzin, R. (1976). Race and sex as stimuli for negative affect and physical avoidance. *Journal of Social Psychology*, **88**, 111–120.

Holmes, R. (1995). Children's artwork and social distance: An examination of children's racial beliefs. *Child Study Journal*, **1**, 23–43.

Houston, S., Wright, R., Ellis, E., Holloway, S., & Hudson, M. (2005). Places of possibility: Where mixed-race partners meet. *Progress in Human Geography*, **29**, 700–717.

Kaplan, P. F., & Fugate, D. (1972). Pilot study of racial interaction in a public place: Northern and Southern settings compared. *International Journal of Group Tensions*, **2**, 63–79.

Koen, J., & Durrheim, K. (submitted). *A naturalistic observational study of informal segregation: Seating patterns in lectures*.

Massey, D., & Denton, N. A. (1993). *American Apartheid: Segregation and the Making of the Underclass*. Cambridge, MA: Harvard University Press.

Massey, D. S., & Denton, N. A. (1988). The dimensions of residential segregation. *Social Forces*, **67**, 281–315.

Massey, D. S., White, M. J., & Phua, V. (1996). The dimensions of segregation revisited. *Sociological Methods and Research*, **25**, 172–206.

Mayhew, B. H., McPherson, J. M., Rotolo, T., & Smith-Lovin, L. (1995). Sex and race homogeneity in naturally occurring groups. *Social Forces*, **74**, 15–52.

McCauley, C., Plummer, M., Moskalenko, S., & Mordkoff, J. B. (2001). The exposure index: A measure of intergroup contact. *Peace and Conflict: Journal of Peace Psychology*, **7**, 321–336.

McKay, R. B. (1954). Segregation and public recreation. *Virginia Law Review*, **40**, 697–731.

Moody, J. (2001). Race, school integration, and friendship segregation in America. *American Journal of Sociology*, **107**, 679–716.

Novelli, D., Drury, J., & Reicher, S. D. (unpublished). *Self-categorization as a determinant of variability in personal space*. Unpublished manuscript. University of Surrey, UK.

Parker, J. H. (1968). The interaction of Negroes and Whites in an integrated church setting. *Social Forces*, **46**, 359–366.

Paulus, P. B., & Nagar, D. (1987). Environmental influences on social interaction and group development. In C. Hendrick (Ed.), *Review of Personality and Social Psychology* (Vol. 9). Newbury Park, CA: Sage.

Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, **90**, 751–783.

Pettigrew, T. F. (2004). Justice deferred: A half century after Brown v. Board of Education. *American Psychologist*, **59**, 521–529.

Pred, A. (1977). The choreography of existence: Comments on Hagerstrand's time-geography and its usefulness. *Economic Geography*, **53**, 207–221.

Remembering Jim Crow. Retrieved Friday 30 November 2007 from http://americanradioworks.publicradio.org/features/remembering/public.html#69.

Ruback, R. B., & Snow, J. N. (1993). Territoriality and non-conscious racism at water fountains. Intruders and drinkers (blacks and whites) are affected by race. *Environment and Behavior*, **25**, 250–267.

Saprito, S., & Sohoni, D. (2006). Coloring outside the lines: Racial segregation in public schools and their attendance boundaries. *Sociology of Education*, **79**, 81–105.

Schnell, I., & Yoav, B. (2001). The sociospatial isolation of agents in everyday life spaces as an aspect of segregation. *Annals of the Association of American Geographers*, **91**, 622–636.

Schofield, J. W., & Eurich-Fulcer, R. (2001). When and how school desegregation improves intergroup relations. In R. Brown & S. L. Gaertner (Eds.), *Blackwell Handbook of Social Psychology: Intergroup Processes* (pp. 475–494). Oxford, UK: Basil Blackwell. Harvester Wheatsheaf.

Schofield, J. W., & Sagar, H. A. (1977). Peer interaction patterns in an integrated middle school. *Sociometry*, **40**, 130–138.

Schofield, J. W. (1986). Black-white contact in desegregated schools. In M. Hewstone & R. Brown (Eds.), *Contact and Conflict in Intergroup Encounters*. Oxford, UK: Basil Blackwell.

Schrieff, L., Tredoux, C., Dixon, J. A., & Finchilescu, G. (2005). Racial contact and seating patterns in university dining halls. *South African Journal of Psychology*, **35**, 433–443.

Shelton, J. N., & Richeson, J. A. (2005). Intergroup contact and pluralistic ignorance. *Journal of Personality and Social Psychology*, **88**, 91–107.

Shelton, J. N., & Richeson, J. A. (2006). Interracial interactions: A relational approach. *Advances in Experimental Social Psychology*, **38**, 121–181.

Silverman, I., & Shaw, M. E. (1973). Effects of sudden mass school desegregation on interracial interaction and attitudes in one southern city. *Journal of Social Issues*, **29**, 133–142.

Stephan, W. G. (1978). School desegregation: An evaluation of predictions made with Brown v. Board of Education. *Psychological Bulletin*, **85**, 217–238.

Stephan, W. G., & Stephan, C. W. (1985). Intergroup anxiety. *Journal of Social Issues*, **41**, 157–175.

Sundstrom, R. R. (2003). Race and place: Social space in the production of human kinds. *Philosophy and Geography*, **6**, 83–95.

Thomas, M. E. (2005). I think that's just natural: The spatiality of racial segregation at a US highschool. *Environment and Planning A*, **37**, 1233–1248.

Tredoux, C., & Dixon, J. (in press). Mapping the multiple contexts of racial isolation: Some reflections of the concept of scale in segregation research. *Urban Studies*.

Tredoux, C., Dixon, J., Underwood, S., Nunez, D., & Finchilescu, G. (2005). Methods for the naturalistic study of contact and segregation in informal social spaces. *South African Journal of Psychology*, **35**, 412–432.

Whitehead, K. A. & Wittig, M. A. (2005). Discursive management of resistance to a multicultural education program. *Qualitative Research in Psychology*, **1**, 267–284.

Vann Woodward, C. (1957). *The Strange Career of Jim Crow*. Oxford,UK: Oxford University Press.

Zisman, P., & Wilson, V. (1992). Table hopping in the cafeteria: An exploration of 'racial' integration in early adolescent social groups. *Anthropology and Educational Quarterly*, **23**, 199–220.