

**Number intersecting with art: three studies  
by John Chilver**

**published in *Distinktion, Scandinavian Journal of Social Theory*, volume 15,  
issue 2, 2014, ISSN 1600 910X, p239-249**

Abstract

*By means of close readings of artworks by Robert Mangold, Florian Slotawa, and Walid Raad, the paper considers some main ways in which number is figured in contemporary art. Mangold's Frame Painting series of the 1980s, Slotawa's Hotelarbeiten of the 1990s and Raad/The Atlas Group's series Let's be honest, the weather helped of the late 1990s/2000s are examined. Mangold's frame-based works are described first as articulations of number as geometrical relation; and second, following from their preoccupation with frame and centre, in terms of their equivocal containment of a central void. Slotawa's Hotelarbeiten are understood as inventories that become performatively and sculpturally recomposed. Raad's work is found to rhetoricize the tropes of the documentary inventory. Number here is figured as geometrical relation or as manifestations of the inventory. Art can thus offer ways of thinking and experiencing number other than as counting or measuring. It is argued that if, in postconceptual art (as in the work of Slotawa and Raad), the artwork is typically a distributed rather than a spatially singular, gathered entity, then inventories (and their transformations) are likely to be how number appears in contemporary art.*

Artistic encounters with number have the capacity to challenge the very idea of what number might be. This article considers how number is figured in contemporary art by examining the work of the three artists – Robert Mangold, Florian Slotawa, and Walid Raad – each of whose work can be understood as a relatively direct or oblique intersection with number. Other better-known, or more obviously numerically oriented, examples could have been chosen in my sample of recent art which deals with number, such as Mario Merz, Mel Bochner, Hanne Darboven, or Tatsuo Miyajima. As is well documented, Merz dealt extensively with the Fibonacci sequence, Bochner played with contingencies of measurement, while Darboven and Miyajima have worked obsessively with numbering in terms of counting notations. Even though the artworks discussed in this article do not identify number precisely with numbering and counting, they do all confront the question of what number is, and how we experience it. Works by Mangold, Slotawa, and Raad indicate that number can be encountered as ratio and geometry, list and inventory. As I explain, much contemporary art invites us to encounter number as inventory or list. This of course involves counting. However, my interest is in cases in which the emphasis is placed less on quantification or counting, and rather located in what is or is not included in an inventory. The consequence of this is that number is usefully thought as the set whose members are identified by the inventory. The article considers how number is figured as geometrical relationship (Mangold); number as performative inventory (Slotawa); and number as documentary inventory (Raad). Each artist therefore exemplifies a specific modality of number, and I address them in historical order. As will become clear, each example presents its respective modality with significant complications, which are in part the motivation for its selection.

Many artists have worked with number in terms of counting, measuring, quantification, and numbering notations (Bois 1995; Miyajima 2008). No doubt these modalities of number are recognizable as routine and everyday. To examine these modalities through artworks is not necessarily to ask what number is, or to problematize its ontology. To approach number only in terms of counting, measuring, and numbering is potentially to frame number reductively as purely a field of techniques. The artworks examined in this paper instead offer ways of approaching

number both phenomenologically and ontologically. Number can be equated with measuring (Bois 1995) and counting (Darboven 2007). But it can also be understood (as elaborated below) in terms of ratio and relation; the set, the list, and the inventory. Although it goes beyond the scope of the paper, numbers can be understood through topology (Badiou 2011, 39). Crucially, artworks can be useful for colliding together phenomenological and ontological approaches to number.

### **1. Mangold: number as distorted geometry**

Robert Mangold has been prominent as a painter associated with minimalism since the 1960s (Shiff, Storr, and Danto 2000, 174–89). Now in his 80s, Mangold continues to work with shaped canvases, often presented with monochrome colouring and frequently containing extremely pared-down, pencil-drawn forms and curves. The affective key to much of Mangold's work lies in the interplay between the filigree (and literally minimal) drawn gestalts and the physical and chromatic assertion of the canvas supports. Sometimes this interplay is disarmingly direct and deadpan. At other times it demands close visual attention, usually via an implied invitation to compare the drawn element with the panel it is placed upon. Throughout his oeuvre Mangold has employed regular geometric forms and relationships as well as parabolic curves and compressed ellipses. Generally the work offers some such regular forms to be viewed in situations where other elements place them under some apparent visual pressure. Frequently that pressure is exerted by comparisons of regular with irregular forms. We can understand number in Robert Mangold's work to be figured as geometrical proportion. The entire body of work since the 1970s, if not earlier, is consistently addressed to questions of how we experience, and visually assess, geometries of shapes and proportions. Here everything is perceptually declared to the viewer, and nothing is deferred or displaced to an implicit elsewhere, as is the case in the widespread norms of current postconceptual practice (Osborne 2013). Mangold is rare among contemporary artists in continuing to work directly with the effects of geometry expressed through shape, line, and proportion. My argument will concentrate on Mangold's *Frame Painting* series of the mid-1980s (Ardalan 2009). As is clear in Mangold's plainly worded titles, each of these works is composed as a visual frame made up of four partially abutting monochrome canvases, which collectively circumscribe an area of blank wall space at its centre. What is framed seems at first to be a pictorial nothing, apparently a chromatic and affective void. This work and the others in the series are remarkable in several ways. I want to stress that the Frame Paintings really do deliver on their title: they are genuinely frames as paintings and vice versa. Despite the huge number of artists since minimalism (perhaps even since Mondrian and De Stijl) who have attempted to make paintings in the guise of the frame – Jo Baer, Jules Olitski, Frank Stella, Peter Joseph, Imi Knoebel, Mary Heilmann, and countless others have tried in a variety of ways – it is perhaps only Mangold who has arrived at a complete and stringent solution. Complete in the sense that with his series neither the framing components, nor the framed central zone, are left unactivated. Thus in *Four Color Frame Painting #5* (1984) (Figure 1), the framing panels are visually bonded tight together by the line of the ellipse that, as it travels clockwise here, passes into each panel on its interior side and then exits at the sole corner that it shares with the blank interior square. These three-fold meeting points, which bind together the panel corners, interior void corners, and points on the ellipse, gather up the three elements of the works (coloured panels, pencil-drawn ellipse, void). The geometrical precision with which the framing elements are linked both invites a visual orbiting of the core as the eye follows the framing circuit around, and sets up complex figure/ground relationships between ellipse and coloured panels and between panels and the central void. This void is ambiguously an element of the work: it is of course graphically unrendered and unoccupied and is left chromatically

inert. Yet as a precisely marked square whose corners meet the ellipse, it is compositionally and geometrically mobilized and mobilizing in the composition.

So much painting since minimalism (and departures from painting) has been driven by the obsessive claim to declare and reveal the wall as the condition of, and unseen other to, the painted plane (as in works by Palermo, Ryman, Stella, Polke, Novros, Charlton, Buren, and others) (Auping 1989; Crimp 1993). While artists like Robert Ryman have made paintings that indexed the object's dependence on the wall by laying emphasis on the fasteners that held it in place, Mangold's Frame works go further in embedding and visually including the wall as an element of the work. *Four Color Frame Painting* is arguably the one work (or group of works) to have composed and performed the genuine presentation of the wall with/in a painting. It is thus a radically immanent work. Some of the existing commentary on Mangold acknowledges this point (Schwartz 2009), though without drawing out its significance. The demonstration that the painting has accomplished this is shown by the difficulty of deciding where the square of white wall is in the pictorial space of the painting, whether it is in the painting at all, and whether it is contained pictorially within the ellipse. This connects with perceiving the continuity of the wall. In other words, it seems that if you see the framed interior square of wall space as continuous with the wall external to the frame, then you tend to see the interior zone as dislodged from the four coloured panels. If you see the interior square of wall as pictorially lifted away from the background wall and lodged in the architectonics of the panels and ellipse, then it does present itself, however equivocally, as a constituent element of the painting and therefore one of its parts.

Mangold's work and the Frame paintings in particular exemplify two approaches to the figuring of number. The first, which is associated with geometry, traces a continuity (though a strained one) with the longer histories of the codifications of proportion in the visual arts (Holt 1971, 53–71). In this respect, it is informative to compare the Frame works with Da Vinci's *Vitruvian Man* drawing. In his iconic drawing, Da Vinci was concerned with mapping the (ideal) human body onto the (ideal) geometric figures of the square and the circle and vice versa. As a didactic diagram *Vitruvian Man* purports to fit the limits of the human body to the boundaries of the square and circle and then to demonstrate that their centre-points coincide with decisive points on the body: in this case, the root of the penis (square) and the navel (circle). Mangold's Frame paintings are conceived rather like hollowed-out diagrammatic misreadings of *Vitruvian Man*, with the square remaining as the anchor but now, as in *Four Color Frame Painting #5* (1984) (Figure 1), with a squashed ellipse standing in for the circle and a central void where there was formerly a figure. This somewhat comic comparison offers a clue to understanding Mangold's deployment of number as geometric proportion. Mangold is rare among contemporary artists in continuing to work inventively with proportion and ratio and very little else. He has been able to do so only by constantly confronting geometric relationships with distortions, decenterings, and perceptual contradictions and paradoxes. These have been manifested in the repeated squashing and deforming of ellipses, stretching and distorting of circles, and placement of regular forms on irregularly shaped grounds, and so forth. In other words, whatever recognizable geometries are available in Mangold's painting are ever liable to distortion and destabilizing. These are at best provisional and precarious geometries. The second of the two approaches to the figuring of number exemplified by the Frame paintings has to do with the above discussion of the central void in *Four Color Frame Painting #5*. As previously indicated, this work is remarkable for the way in which it inserts and introjects the framed square of wall space within itself structurally. What are the implications for number? Here number can be understood as indirectly, though significantly, evoked though the notion of the set. The Frame paintings can be regarded as attempts to test the figure/ground boundaries of the work at and beyond its own limits. Hence they pose the problem of what does and

does not belong to the set that constitutes the work, and, in particular, the question of whether the wall can belong to the set of elements that is the work.

## **2. Slotawa: number as performative inventory**

In his *Hotelarbeiten* series of 1998–9, Florian Slotawa booked himself in to mid-priced European hotels on specified dates. Once checked in and ensconced in the privacy of the hotel room, he set about dismantling the furnishings and fittings. Using whatever was to hand, he then constructed provisional shelter-type assemblages. These were photographed, and then lastly the room and all its furniture were carefully re-arranged to return everything to its original state before check-out time. The works are shown and distributed as black andwhite photographs (Figures 2 and 3). As photographs the *Hotelarbeiten* have been extensively exhibited and circulated in reproduction, initially reproduced in the magazine supplement of *Süddeutsche Zeitung* (Stelzer 1999). But of course the works present themselves equally as performances, sculptural assemblages, and photographic documents. Like much of recent and contemporary art, Slotawa's works begin with what can be referred to as an inventory. The inventory can be understood as a numbered list and indeed has frequently appeared as such in artworks. In the words of the critic and curator Nicolas Bourriaud, ' [t]o rewrite modernity is the historical task of this twenty-first century: not to start at zero, or find oneself encumbered by the storehouse of history, but to inventory and select' (Bourriaud 2005, 93, emphasis added). In the *Hotelarbeiten* the inventory is treated as kit for composing an assemblage. It is the inventory of fittings and furnishings found in the hotel room. Slotawa's hotel works form their own inventory and compose their own taxonomic layers and folds. The works are constructed out of found inventories in each room, and in this way the group of works also forms its own list. Time and space are indexed to number by the date and room number, respectively. Much like the day as a member of the month, the room belongs to the set of rooms, whose members are numbered. The objects that, overnight, become component parts of this improvised shelter are a subset of whatever belongs to the room. It is important here that the subset is not simply tabulated or listed, but constructed into a new unity or whole in which the parts have functional roles to play relative to one another, such that they are not substitutable: a particular rotated armchair can support an unhinged door but not vice versa. Thus there is a unified construct here that makes up a new composition, and is not just the nomination of a list or a subset of a list, not just a matter of naming a selection of an inventory. There are also echoes of the set throughout the *Hotelarbeiten* at other registers. The works of course are conceived as temporary shelters nested within permanent shelters. More than that, these works index the inventory of fittings that is frequently displayed on the back of the hotel room door, or, more evocatively, the displayed list of regulations and prohibitions through which the room's inventory is frequently represented. Just as the work presents a subset of the inventory that was not and is not represented, so it also presents a set of actions and behaviours that were not represented nor anticipated among the hotel's list of standard prohibitions.

Slotawa's works are admirable for their resourcefulness, stealth, and humour. In terms of how we might build theories of number, they are notable for the way in which they augment the function of the inventory by linking it to composition. Quite how much it makes sense to call the result of this exercise sculptural composition here is less important than the crucial fact that something gets physically constructed or composed, however provisional or ephemeral it may be. In this respect Slotawa both embraces and departs from the inventory as such. For him the inventory provides the kit for a unique, ephemeral spatial construction, yet the construction seems to follow its own impulses and idiosyncrasies and can in no way follow rationally from the inventory. These works can be understood in terms of an

important trajectory in postconceptual art practice that privileges the inventory or list. Though it may seem meagre or disappointing to somebody expectant of a more edifying artistic liaison with number, the inventory or list is arguably the dominant mode by which contemporary art figures number. With that in mind, it is worth noting that Slotawa's hotel room compositions are explicitly nominated as numberings of space and time: *Hotel Inter-Continental, Leipzig, Room 2116, Night of 12 December 1999* and *Hotel des Vosges, Strassburg, Room 66, Night of 13 March 1999*, and so on. The ostensible rationality of these numerical descriptors and of the inventory itself is then confronted with the ostensible irrationality of the shelter constructions. These constructed assemblies play with their inventory of materials to build a new whole in which the items on the list are non-equivalent. For example, in *Hotel des Vosges, Strassburg, Room 66, Night of 13 March 1999* (Figure 3) one unhinged door serves as a kind of load-bearing wall, whilst another functions like a ceiling beam. Obviously the pillows or mattresses cannot serve in these roles. In other words, the literal interdependencies of the objects as composed in the shelter assemblies stress their different and various physical affordances. As mute and numerically equivalent items on an inventory they may not yet exhibit these affordances, but the composition makes them explicit. One response to Slotawa's hotel series is then to regard it as a sequence of improvisations in the non-place of the hotel room, whereby the very inventoring of space and time that renders the room as a kind of non-place (Augé 1995) is undone by recomposing its furnishings and thereby constituting a performative 'dwelling' that, through its uniquely ephemeral construction, signifies place, albeit fleetingly (compare Wege 2002). The artwork qua composed assemblage thus performs the inventory of materials anew and thereby contests the givenness of the inventory. If one major observation made by contemporary artworks (such as Slotawa's) is that number is experienced today frequently in the guise of the inventory, then Slotawa's work stands for an interrogation of that experience. The particular question posed is, in effect, this: what happens between the designation of the inventory as an itemized list and its rendition in and as a local assemblage? Here I use 'assemblage' to signal associations both with collaged sculptural artworks such as those of Rauschenberg, and also to indicate an affinity with Latour's actor-network-theory (Latour 2005, 2). This zone between list and assemblage can be thought as the interface between an immaterial entity (the inventory as a list of items abstracted from contexts) and a material presentation (the items as objects located in space and time). In this way the *Hotelarbeiten* emphasize how the inventory operates between the material and the immaterial. Furthermore, they expose the infinite variability contained within the ostensible finitude of the inventory by performing some of its possible subsets as assembled material iterations.

### **3. Raad: number as documentary inventory**

Walid Raad's work is apparently synonymous with the work of The Atlas Group, whether one regards the latter as Raad's nom de guerre, fictional artistic alias, or as an existing though elusive collective. (Though it quickly becomes clear that the playfulness surrounding the group's name and existence is matched by the fictionalization and playfulness in its use of evidential and archival tropes.) Much of The Atlas Group's work adopts taxonomic and nominative strategies. Rooted in the war-ravaged and scarred textures and architectures of Beirut, The Atlas Group concocted and compiled documentations that claimed (however rhetorically and however reliably) to examine the urban fabric forensically and evidentially as historical scenes and sites (Borchardt-Hume 2010). In these documentations The Atlas Group tended to counterpose the playfulness, humour, and decorativeness of its taxonomies with the enduring violence of its historical setting. In the series titled *Let's be honest, the weather helped*, we are presented with what we are told are

colour-coded records of bullet cases found at the photographed locations (Figure 4).

Again, as with Slotawa above, we are in the domain of the inventory or the numerically itemized list. There is a baroque feel to this rendition of the list as an overflow of frothing green bubbles. Odd indeed to compare the chromatic joviality of this inventory with the ardent righteousness of an older work such as Hans Haacke's *Shapolsky et al* (1970) (a now canonical conceptual work that listed and mapped Manhattan real-estate transactions as an act of unmasking), especially given that the political stakes are so much starker in *Let's be honest*. Here the Atlas Group combines a certain light decorativeness or even frivolity with gallows humour and the manner of deadpan reportage, though the manner – the rhetoric of forensic record-taking – here is far more important than its substance. This curious mix of qualities chimes with the intuition that the inventory can now be approached obliquely, if not satirically. Oblique in the sense that the *Let's be honest* series seems in the end to be as much about rhetoricizing the list as it is a straight transitive application of the list as forensic record. Humour and colour are key to that oblique approach here. The role of colour in this baroque list scenario is intriguing. Obviously it is a truism that colour can either differentiate samenesses, as when the bodies that make up opposing teams wear contrasting shirts; or homogenize differences, as when the various players of one team are unified by their common shirts. Colour, in other words, can be understood as being intimately related to numbering in that it is a means of branding, or can serve as a marker of what belongs to an inventory. Colour in *Let's be honest, the weather helped* is ostensibly introduced as a coding device but clearly exceeds that role. It is hard to avoid the implication that the generous sprinklings of sharp green or the oranges and magentas in other works of the series stand for the aesthetic as such, in other words the aesthetic understood as the domain for attending to sensuous particulars. The wit of these works is wilfully to confuse the aesthetic with the list. On the one hand, the pure chromatic force is what exceeds the code-carrying role of the colours here and thereby positions the aesthetic in opposition to the list-marking job that colour does. On the other hand, if we seriously wish to scrutinize these chromatic documents in order to say which bullets were found where, then we must precisely attend to the colours in their sensuous particularity, much as we would under the aesthetic dispensation. In a separate series from the 1990s The Atlas Group documented Beirut car bombs in a series of works titled *My neck is thinner than a hair: Engines* (Borchardt-Hume 2010, 69– 73), which recorded engine types and listed how many metres each was found to have travelled from its car body in an explosion. In another series, *Missing Lebanese Wars*, bets, we are told, were placed on horse races by historians of the civil wars, and outcomes recorded, including exact finish times of the winning horses and the time elapsed between the instant of the photo-finish and the instant of the winning horse crossing the line. It would be hard to envisage a documentary work that more explicitly toys with the ontological inadequacies of its own documentary evidence, in this case the photograph of a finish that is measured in its precise deviation from the time of the finish. There are thus large doses of allegorical shenanigans to be reckoned with here. As Alan Gilbert has noted, this 'disregard for... veracity is not the result of willful subterfuge; rather, it is meant to convey a sense of time... that has been irredeemably shattered' (Gilbert 2010, 116). The Atlas Group's work is extensively addressed to the evidential inventory or quantified document as a privileged testimony of contemporary history. However, by producing an evidential inventory that furnishes the numerical data of conflict histories in a spirit of playfulness, they point to the gulf between the qualities of subjective encounters under conflict and the numerical data. In foregrounding the crafting of fictional documents (Osborne 2013, 28– 35) the work both points to the story-constructing aspect of all histories and testifies to the pathos of the powerless documenter, both as the one driven to count up bullet cases and measure quantities and distances, and as the one driven to concoct stories.

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Following Peter Osborne's recent writings (Osborne 2013), I understand a postconceptual artist as one who presents works that are not fixable in space and time, but are instead spatially and temporally distributed or dispersed. In the broadest sense, Slotawa and Raad are postconceptual artists. As has been described above, Slotawa's *Hotelarbeiten* are – equally – performative events, sculptural constructions, and documentary photographs. In this sense they are 'distributed' works such that no one mode or point of instantiation has priority. The distributed work offers a means of deferring or exporting presence. It therefore has the advantage of being able to refuse to locate itself in space and time. However, in terms of embodying or encountering number, this also implies an inability to instantiate number within a bounded form or presentation. To the extent that the distributed artwork is characteristic of current postconceptual practice, contemporary art, as exemplified by Raad and Slotawa, would appear to be resistant to the construction of forms or constellations that can condense or sublimate number into resolved images or locatable appearances. Mangold provides a contrast here. He is not a postconceptual artist and clearly does not make distributed works. Instead he creates entities that can indeed be viewed as visual condensations of number or of geometrically mediated numerical relationships. His painting signals a partial continuity with pre-modernist aesthetic discourses that linked number to art through idealized proportions and ratios. Yet, as we have seen, Mangold never simply locates resolved geometrical forms or relations. Rather his work tends to site relatively regular forms, especially ellipses, in entangled relations with other arbitrary or irregular elements such that there is some mutual interweaving or interdependence. Often in the *Frame Painting* series this gives the impression that a formerly regular ellipse has been grafted onto an alien rectilinear scaffold and has had to be squashed or otherwise deformed in order to make it fit. I do not wish to invoke particular metaphorical readings here. But clearly there is a strong sense of stable forms encountering contingencies here, and becoming deformed in the process. Number is still figured as condensed geometry here, but its integrity is rendered provisional.

The distributed postconceptual artwork, by contrast, lends itself to the examination of entities or narrative chains or social assemblages that are spatially and temporally dispersed. Hence it is suited to figuring number not through condensed images or forms but through extendable and interlocking chains, such as numbered lists and inventories. Slotawa's *Hotelarbeiten* series, which can be seen to operate almost as if it were a Russian doll of inventories, is exemplary in this regard. On the one hand, the list or inventory is equivalent to an abstraction of number as the set, where the items on the list constitute the members of a set. On the other hand, the inventory evokes the everyday channelling of information, materials, and behaviours that we attempt to marshal through devices like the 'To Do' list, which is, of course, forever extendable and open to revision, as has been examined elsewhere (Phillips 2012). Mangold's pressurized geometry and Raad's and Slotawa's improvisations with inventories can be understood as attempts to figure number as subject to contingency. If Raad and Slotawa exemplify a main approach to number in contemporary art through the inventory, then how is the inventory re-constellated in their works? For both Slotawa and Raad, the inventory is there to be acted upon and exceeded. It is received or unravelled as a nominative device, the nomination of the members of a set, or, in effect, a list of names. The artwork here proceeds by locating an excess in the inventory. For Slotawa it is the assemblaged composition that occasions and presents this excess. For Raad it is colour.

The artworks discussed above exemplify three modalities of number: number

as geometrical relationship; as performative inventory; and as documentary inventory. This essay does not claim that these three constitute a complete or an exhaustive taxonomy. There are of course other modalities. Given the postconceptual character of most contemporary artworks (as spatio-temporally distributed unities), it is to be expected that the inventory is the dominant mode for figuring number. That is because the inventory has a kind of ontological privilege with respect to the distributed artwork in that it can link elements at different points in the distribution and because it can operate between the conception and the materialization of the work. In other words, the inventory has the virtue of being both immaterial and material. Therefore, in terms of the tropes or formations that are capable of figuring number, the inventory has a marked advantage with respect to the contemporary distributed artwork.

As indicated above, if number is only grasped as a set of pragmatic techniques for quantification then we lose contact with the ontological questions around it. Such questions come to matter because, firstly, quantification only accounts for a limited portion of our experience of number and, secondly, the very posing of the ontological questions draws attention back to other experiences and effects of number that do not fit neatly into a quantificatory account. Mangold's work in part harks back to a pre-modernist discourse of number as aesthetically idealized proportion. Yet as I have described it above, although the work retains proportion as a constant resource, it nonetheless subjects these geometrical relations to the deformations of contingency. Quantification as such plays no role in Mangold's geometrical presentation of number, which invites the viewer to experience number as relation, or vice versa. In the works of Slotawa and Raad, number is figured as the inventory, which is equated here with the list or set. In Raad's work, quantification is of course central to the inventory. Of much more importance is how the inventory slices and dices social space, how it groups, unites, compares, bounds, and separates things. In Slotawa's work the stress is placed on the movement between the inventory itself and the inventive sculptural reassembling of its items. This can be understood as a humorous replaying of the ontological separation of the number as an abstracted count, on the one hand, and the material entities it counts, on the other. But again here the quantitative count of the inventory is unimportant, except in that it defines inclusion or exclusion from the list. While counting and numbering of course remain vital to the set or inventory, the artworks here by Raad and Slotawa that configure themselves as inventories imply that there are crucial effects of number that outrun quantification as conventionally conceived. They imply that number understood as inventory is a means of segregating, categorizing, singling out, and grouping things and people. They also rehearse ways of resisting such categorization from within.

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