

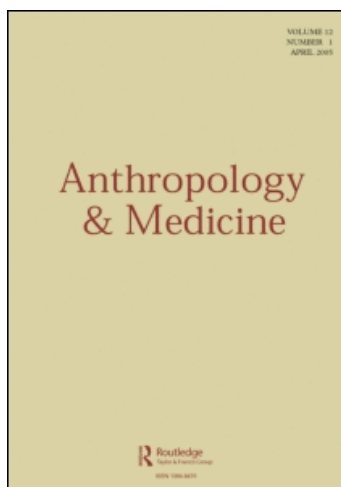
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The assemblage of compliance in psychiatric case management

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The assemblage of compliance in psychiatric case management

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In the post-asylum era, case managers perform much of the face-to-face work of pharmaceutical compliance for people with severe and persistent mental illness. Their work demands careful orchestration of the assemblage of compliance, including the actual medications, the ideology of biopsychiatry, the division of professional labor, and certain mundane tools. Ethnographic vignettes from an Assertive Community Treatment (ACT) team show how case managers use this assemblage in their everyday routines, but also how it undercuts key elements of the original ACT mission. Reflecting its roots in the deinstitutionalization movement, the ACT model gives case managers limitless responsibilities for clients' lives, but then narrowly defines their role as the prosthetic extension of psychiatric authority. To produce compliance, case managers depend on the medication cassette, analyzed here as a human/non-human hybrid woven into their ordinary work. The medication cassette has pre-scripted uses that enlist clinicians in biopsychiatric thinking and also silently impose compliant behavior on clients. The elements in the assemblage of compliance depend on each other, but they do not form a seamless whole, as evidenced by the dilemmas and micropolitics of the clinical front-line. Theoretical notions of assemblages and technologies of compliance, drawn from science and technology studies, illuminate a core conundrum of practice in psychiatric case management.

Keywords: compliance; case management; community psychiatry; Assertive Community Treatment; medication cassette

Introduction

In developed nations today, the vast majority of people who become hospitalized for severe mental illness actually spend most of their lives outside of brick-and-mortar institutions.¹ Once discharged, many people enter a fragmented system of outpatient services including day hospitals, mobile outreach teams, psychosocial rehabilitation agencies, and case management programs (Breakey 1996). These services vary considerably in terms of their rationale and organization, their place in larger medical and welfare systems, and the distance they establish between staff and client. Nonetheless, they all endorse psychopharmaceuticals as a key part of long-term treatment. They therefore plunge both staff and clients into the dynamics of compliance: the micropolitics surrounding the acceptance, refusal or negotiation of prescribed medications.

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This paper regards compliance in community psychiatry as a situated practice: a matter of everyday routines and face-to-face exchanges. The ethnography of this practice must attend to front-line clinicians who literally hand pharmaceuticals to their clients as well as the distant regimes of power and knowledge that shape such observable negotiations (see Das and Das 2006). The following ethnography concerns a work-team based on the principles of Assertive Community Treatment (ACT), an outpatient program that emerged from decades of mental health reform in the United States and has diffused throughout the industrialized world.² The ACT model, a hybrid of social work and psychiatry, gives case managers the greatest responsibility for clients' lives, but also it limits their range of action and narrowly defines their expertise. Tracing this program's history helps answer two questions: how do case managers conceive of and carry out their work? What clinical gestures and mundane tools do they deploy to produce compliance? The history of ACT will set the stage for a close analysis of the medication cassette: a simple technology whose pre-scripted uses shape the very practice of psychiatric case management.

Several ideas from Science and Technology Studies inspire the arguments of this paper. Undoubtedly, the ideology of biopsychiatry (Luhmann 2000) pervades the entire range of outpatient services for people with severe mental illness. The reductionist focus on brain chemistry legitimates psychopharmaceuticals as a core treatment, and it justifies the complex efforts to deliver medications efficiently and document compliance. But routine clinical practice, like the everyday work of bench scientists, is animated by much more than ideology. It is also constrained and enabled by the tools at hand: specific techniques, instruments, and models (see Clarke and Fujimura 1992, 3). In this light, psychiatric case management is a kind of craft work, accomplished in a particular time and place by people utilizing the available resources. Looking at how people use ordinary tools will shift our angle of vision from the contents of psychiatric knowledge to the ecology of clinical routines.

Ordinary case managers must accept the biopsychiatric viewpoint in order to carry out even the most minor details of their work. They accept it, however, not as a singular belief system, but instead as one component of the larger 'assemblage of compliance.' An assemblage is a whole constructed of heterogeneous parts that retain their distinctive identity. It is not a seamless whole, precisely because the parts are so unlike each other. For example, the symbiosis of plants and pollinating insects is an assemblage: its ultimate function cannot be reduced to the properties of any single part. But the relations between the parts clearly arise from history (in this case, coevolution), not logical necessity (De Landa 2006). Applied to the task of ethnographic analysis, the notion of social assemblage insists that the various components do not really aggregate; they come together contingently at particular cultural and historical periods. Stem-cell research, for example, is an assemblage comprised of genetic and bodily material, scientific expertise, global capital, and ethical regulations (Franklin 2005). As stem-cell researchers know all too well, there is nothing inevitable about their enterprise. Practicing stem-cell research depends crucially on particular political and technical arrangements (Collier and Ong 2005), and sustaining them takes enormous effort.

The relevant assemblage in community psychiatry comprises the pharmaceuticals themselves, the dominant ideology about mental illness, the organization of clinical work, and mundane tools of the trade such as medication cassettes. Front-line case managers operate within and orchestrate these various components. Tracing the

origins of this assemblage, the entailments between separate components, and the contradictions it poses for front-line case managers will illuminate their everyday work of producing compliance.

Ethnography of compliance at the clinical front line

The vignettes below come from a two-year ethnography of an intensive case management team, founded on the principles of Assertive Community Treatment, in a mid-sized city in the American Midwest.³ The pseudonymous Eastside Services operates out of a multi-specialty clinic in a poor inner-city neighborhood, and it strives to bring all needed medical, psychiatric, and social services to 75 clients who have severe, chronic mental illness (primarily schizophrenia). All the clients have extensive prior hospitalizations, but they currently live in the community, and many would have great difficulty obtaining medical and social services on their own. They risk becoming more psychiatrically unstable, homeless, re-hospitalized, or incarcerated (typically for non-violent offenses such as loitering, disorderly conduct, and drug charges). Eastside case managers are primarily social workers (with a BA or MSW) who travel to clients' homes and deliver medications, watch clients take them, and assess their symptoms. In line with the ACT mandate, staff also take clients shopping, help them find new apartments when they get evicted, control their money and write their budgets, broker for services with other providers, negotiate with their probation officers and landlords, testify at commitment hearings, and do whatever else is necessary to help them succeed in community living.

Case managers use various techniques in several different settings to encourage compliance, but their daily rounds always start in the 'med room.' Every morning immediately after staff meeting, they file into this small locked room in the agency office and assemble their stocks. Seventy-five plastic shoe-box sized containers, one for each client, line the room on floor-to-ceiling shelves. Each box is filled with a mixture of pill bottles, syringes, vials, and over the counter ointments, aspirin and vitamins. Case managers double-check the prescription records for their clients before loading up their backpack with the necessary meds for the day's work. They also grab a few plastic medication cassettes from a large basket, supplied at no charge by the sales representative from Lilly Pharmaceutical. These simple devices have separate compartments for a week's worth of pills: seven slots for once-daily dosages, or 28 slots marked morning, noon, evening, and night-time, arrayed in seven rows. Equipped with the medications, a few cassettes, and the clients' charts and daily cash disbursements, clinicians fan out to people's apartments and rooming houses across the city.

A 'med and money drop' is the minimal contact between case manager and client – the baseline clinical gesture at Eastside Services. Every day, the supervisors circulate a coverage sheet for clients whose case managers are sick, and this handwritten page lists the minimum flow of goods and services:

- Mathew Haberman: Med setup, 10 bucks, and cigs
- Michelle Digby: Socialization visit, cigs, soda, \$5 cash
- Trey Glover: \$10 cash. He has meds. Symptom assessment and supportive psychotherapy
- Amanda Tillman: Med monitoring, insulin, blood sugar. Client will most likely be at her sister's, Nicole, 463-9843

Linda Torres: Med set up, 10\$, he swallows Prozac in front of you and keeps the cassette.

The flow of cash, cigarettes and soda is the scaffolding for all entries. It means to keep people ‘engaged’ (staff members’ term) so they continue to accept the agency’s pharmaceutical interventions. Even these telegraphic instructions convey the micro-politics of compliance. Some people push back at unwanted services, so their case managers decide they must watch them swallow their meds or keep track of them as they move between apartments. Other people accept medications, at least for the time being, but under several different arrangements. The case manager may deliver a week’s worth of meds in a cassette and simply remind her client to take the pills on time, either during daily visits or with telephone prompts. Compliance in this mode of treatment clearly is not an all-or-nothing matter.

Case managers deploy a wide range of tactics to deliver and monitor medications, illustrated in the following vignettes:

‘I’m swamped this morning,’ Ryan Geary told me as we headed out of the agency parking lot. With someone new added to his caseload, and an emergency erupting with another client just discharged from the hospital, he needs to rush through his scheduled home visits. After several years on the job, Ryan has developed a confident, non-nonsense style. His first appointment, a middle-aged man named Daniel Lemke, was waiting in the lobby of his apartment building as we arrived. He slowly walked to the car and leaned over the driver’s side window. Ryan handed him a small manila envelope with that day’s medications and a five dollar bill, and the two chatted briefly. As Daniel hobbled back to his building, Ryan remarked to me, ‘Look how he’s walking. He’s been drinking.’ The entire routine – med and money drop and symptom assessment – took less than five minutes.

Wanda Tamms sat patiently next to a desk at the Eastside office, as her case manager searched through a plastic bag full of pill bottles and blister-wrapped medications. Carl Heiser finally pulled out her MAR (medication administration record): the one-page printout of a client’s complete regimen. He asked, ‘Do you have the cassettes I gave you last week? . . . Alright, I’ll give you a new cassette. Go ahead and fill another week of medicine.’ One by one, Carl took pill bottles from the bag, checked the MAR, handed the bottle to Wanda, and said how many dosages to place in which compartment: ‘You take this every 12 hours . . . Okay, Seroquel You get four of those at bedtime.’ He watched carefully as she filled up the cassette, and chided her if she got off track, ‘What are you doing? Picking and choosing your meds?’ When she finished, he peered intently at the individual compartments and told her, ‘You’re missing Monday and Sunday.’

On her daily visit to Matthew Holmes’s apartment, Erica Koenig knocked several times before the door opened to a haze of stale cigarette smoke. Matthew led us to his dilapidated living room, where Erica took out the med cassette, opened the Wednesday compartment and asked him briskly, ‘Will you get a glass of water?’ She emptied the meds into his hand, and Matthew swallowed them with a sip from a nearby bottle of milk. She followed up with a series of questions, ‘Do you need to do laundry today? Next week? You’ve been wearing the same shirt for two days! . . . When do you need to go grocery shopping?’ She glanced at the beer cans in the trash, and then barely stopped to ask permission before opening the refrigerator door. ‘I see some hot dogs and some cheese,’ she said to herself. A few moments later, Erica settled what time she would come tomorrow and walked out to her car.

Such moments of compliance are not the pure product of clinicians’ persuasive skill or clients’ enlightened self-interest. Even at the level of face-to-face interactions, compliance is a social accomplishment, not simply a psychological process of persuasion and consent. Case managers depend on an assemblage of instruments, procedures and ideologies to secure a client’s agreement to medication. Indeed, this

assemblage defines and regulates everyday routines in a silent but predictable fashion. Much of the assemblage lies outside the scope of this paper. Case managers use the disbursement of clients' entitlement monies to encourage compliance with pharmaceutical treatment, exemplified in the first vignette. Eastside Services serves as the 'representative payee' (an official role established by the US Social Security Administration) for many clients who receive federal disability funds and other types of income supplements. Although the agency technically cannot make the money contingent on accepting medication, case managers nonetheless establish an informal *quid pro quo* that stays within the legal boundaries. Eastside staff also occasionally utilize civil commitment orders to enforce treatment. Under this arrangement, outright refusal of medication will set in motion a pickup of clients by the county sheriff and forcible hospitalization.

This paper, however, focuses on the mundane strategies of compliance that apply to virtually all clients on a daily basis. Compliance as a clinical gesture is deeply embedded in the organization of the ACT team and the simplest tools for work. The ethnographic analysis of compliance tacks back and forth between clinicians' point of view and a more distanced gaze on the broad landscape of psychiatric case management, and the account begins with the historical origins of Assertive Community Treatment.

Genealogy of Assertive Community Treatment

The founding conditions of ACT have become folded into Eastside Services, and they inform the apparatus of compliance used in daily work. ACT arose as a response to the failures of deinstitutionalization in the US mental health system. By the mid 1970s, media exposés about the homeless mentally ill and the 'dumping' of ex-patients into dilapidated single room occupancy hotels fueled broad public dismay. Expert opinion in psychiatry and health policy was equally scathing. According to the new consensus of that era, 'the rhetoric of deinstitutionalization seem[ed] to mask a brutal political and economic reality – the general abandonment of mentally disabled people' (Rose 1979, 440). In earlier decades, professional psychiatric discourse had celebrated community care as a therapeutic revolution and an end to the dark ages of institutional confinement. During the 1970s, this discourse evaporated almost without a trace. Psychiatrists and social scientists instead characterized deinstitutionalization as programmatic chaos, a disaster, and a continual failure in which bureaucratic needs trumped patient care (the terms used by Scherl and Macht 1979; Talbott 1979, 1984; Brown 1985).

Policy makers and clinicians started to move in fundamentally new directions, and the Community Support Program (CSP) was their first high-level initiative. An ambitious, top-down effort at systemic reform, it grew out of working conferences at the National Institute of Mental Health in 1975 to 1977 (see Turner and TenHoor 1978). This approach rejected the naïve assumption that hospital closure naturally leads to ex-patients' 'community integration' (a vague and poorly-defined phrase). The Community Support Program began instead with a cold appraisal of the practical results of deinstitutionalization. People with severe mental illness faced enormous obstacles in getting services from general hospitals, social welfare agencies, legal clinics, public housing bureaus, and employment training centers. Such mainstream institutions simply had no experience with the mentally ill and no

mandate to serve them. People instead entered what became known as the revolving door pattern of brief in-patient stays, stabilization via medication, discharge to the community, resumption of isolated and disorganized lives, and subsequent rehospitalization. As a result, people with the severest and most disabling illness often lived in the most marginal and dangerous surroundings, and they depended on a fragmented collection of out-patient medical and social services. In stark contrast to the earlier era of total institutions, they became scattered throughout society, with no single organization or profession accepting responsibility for their welfare (Grob 1994, 268).

Faced with this bleak landscape, CSP architects identified ten essential functions of community services (Turner 1977). Their list did not even mention prevention or cure of mental illness. 'Medical and mental health care' was just one item, along with psychosocial rehabilitation, 'supportive services of indefinite duration' and 'case management: a single person or team responsible for remaining in touch with clients on a continuing basis.' Rehabilitation and long-term socio-medical support became the pillars of the CSP approach, which thus demanded a collaboration between the disciplines of psychiatry and social work. Over the past decades, a handful of academic clinicians have translated the high-level blueprint of community services into workable programs on the ground.⁴ Each program strikes a different balance between the remarkably different orientations of the two core disciplines. The Strengths-Based approach studied by Floersch (2002) gives case managers the leading role. This approach privileges social work notions of access to community resources over psychiatric schemes of assessment, diagnosis, and treatment. By contrast, Assertive Community Treatment emphasizes much more the categories and authority of professional psychiatry. The first ACT program began inside the research unit of a large state hospital in Dane County, Wisconsin. To address the revolving door problem (of discharge, abandonment in the community, relapse, and re-hospitalization), a psychiatrist and social worker with clinical appointments at the University of Wisconsin retrained the entire staff of a hospital ward and transferred them to a rented house in a downtown neighborhood (the history is recounted by Thompson, Griffith, Leaf 1990 and Dixon 2000). Their program supplied to ex-patients, now living in cheap apartments and room-and-board facilities, the same range of medico-social services that previously came bundled together in the state hospital.

The ethos of Assertive Community Treatment owes much to the community support blueprint; not surprisingly, since its founders participated in the original NIMH conferences. To succeed in the community, people with serious mental illness need both medical treatment and material resources such as food, shelter, and clothing. They need to learn basic coping skills in real-world contexts. They need on-going social support, and their families, landlords and employers also need education about mental illness. Nonetheless, the architects of ACT inserted this social work approach inside the neo-Kraepelinian viewpoint that was at that time revolutionizing American psychiatry as a whole. The year 1980 saw the publication of both the first landmark study of ACT (see Stein and Test 1980) and the DSM-III, the *Diagnostic and statistical manual of mental disorders* (third edition), with its explicit, research-tested criteria for disorder. The DSM-III tried to rationalize psychiatric research as a scientific enterprise by providing stable and mutually exclusive categories for disease. Researchers could then be confident they meant the same thing by the ostensive

labels 'schizophrenia' or 'depression.' The academic clinicians who scaled up ACT applied the same logic of standardization and verification to mental health services. They measured outcomes in a way that invited further refinement, with validated instruments that quantified community adjustment, self-esteem, family burden, etc. With these outcome measures in hand, researchers across the country could replicate the program and test it against other treatments.

In 1998, after almost 30 years of development, several long-time ACT clinicians published manuals that provide a conceptual rationale for the model (Stein and Santos 1998) and detailed instructions for running programs (Allness and Knoedler 2003, first edition published in 1998). The authors frame mental illnesses as brain diseases: discrete, organic malfunctions, each with its characteristic signs, symptoms, course, and impairments. They fundamentally endorse 'pharmaceutical reason' (Lakoff 2005), that is, the notion that psychotropic drugs will restore normal cognition and affect and that each drug targets a specific disease or symptom. They write their ACT handbooks as clinicians first and foremost, not as social critics of deinstitutionalization. The revolving door pattern is simply bad medical practice that treats the acute episode of a chronic disease but neglects its stable phase. The out-of-control phase and the stable phase of serious mental illness require distinctive treatments. Acute psychosis and disorganized behavior requires hospitalization and medication. The stable phase involves several key impairments: vulnerability to stress, deficient life skills, difficult interpersonal relationships, and inability to generalize skills learned in one setting (such as the hospital) to another (the community). Medication is also crucial in this phase to prevent relapse, while continuous support and life-skills teaching target the other disabilities.⁵

The biopsychiatric logic of Assertive Community Treatment reaches deep into the organization of work at Eastside Services. The division of labor dictates that the psychiatrist – the highest ranked clinician – prescribes medication, while the case manager delivers and monitors it. The hegemony of pharmaceutical reason thus supports and is supported by the standard occupational hierarchy in health care. Social workers, of course, have historically mediated between powerful professionals and bureaucracies, on the one hand, and their clients, on the other (Ehrenreich 1985). Case management grew out of the practices of early 20th Century medical social workers who visited patients in their homes, reported their domestic conditions to the doctor, and helped carry out the latter's orders (Beder 1998). Deinstitutionalization during the 1960s and 1970s required a similar figure to follow people into the community and broker the flow of resources, in one direction, and information about outcomes and compliance, in the other. Case managers are now key actors in the US medical and social welfare systems. They typically do not provide services themselves, but instead connect clients to other resources and keep track of their overall life conditions.

Case management helps remedy the fragmentation of health care, but at the price of deprofessionalizing the individual social worker (see Austin 1990). Within ACT teams, the role of case manager is subordinate to and reinforces the structural authority of the ACT psychiatrist.

The textbook ACT model locates case managers as the conduit from the psychiatrist to the client – a human delivery system that extends the doctor's reach into people's own living spaces. Case managers at Eastside Services lack the authority to alter clients' doses, to recommend different medications, or even to

interpret the side effects that they observe during home visits. Such activities are reserved exclusively for the psychiatrist, and no-one challenges his expertise. Case managers visibly perform their lack of authority when they help a client fill the medication cassette. They are not prescribers, so legally they must not even handle the pharmaceuticals. They are instead trained to open the bottle, tap the pill into the lid, and then hand the lid to the client, who drops the pill into the appropriate compartment. If the bottle gets knocked over, case managers carefully avoid touching the pills as they sweep them into an envelope for return to the agency. This elaborate game enshrines the special status of pharmaceuticals – the baseline medical treatment, controlled only by psychiatrists – and thereby translates the lines of clinical authority into the details of face-to-face work with clients.

ACT began as an experimental relocation of in-patient services to a community setting. It carried with it the biopsychiatric viewpoint and adapted the standard hierarchy of medical labor to community settings, with case managers as the linchpin. This genealogy illuminates the structurally ambivalent position of case managers within the assemblage of compliance. With far less power than the psychiatrist, they also have far more direct knowledge about clients' lives. Their position, therefore, consolidates the knowledge/power of ACT team as a whole over clients. Case managers serve as not only a prosthetic extension of the psychiatrist's prescribing authority, but also his transportable eyes and ears that scrutinize clients and then report at staff meeting what they found. A single part-time psychiatrist can thereby oversee the compliance of 75 severely ill individuals, whom he may see only every other month. The power and knowledge to enforce compliance are engineered into the particular division of labor on the ACT team.

The medication cassette: a human/non-human hybrid

Advancing the ethnography of compliance demands close attention to the medication cassette itself. The med cassette is a visible material object and a tool for use, not a sociological abstraction like the clinical division of labor. Nonetheless, it contains an enormous amount of sedimented social authority that shapes the conduct of professional and patient alike. Psychiatrists and case managers use the med cassette everyday with barely a second thought, yet the tool recursively determines how these clinicians carry out their job. Tracing its effects reveals again that compliance is an assemblage, that is, an orchestration of ontologically discrete parts. Compliance in community psychiatry depends on a fusion of labor relations, expert knowledge, and certain tools and techniques that hook into and silently reinforce each other. The med cassette is a material object – definitionally non-human – but it nonetheless enters deeply into case managers' knowledge, self-definition and interactions with clients.

Bruno Latour's (1992) essay on the sociology of mundane artifacts provides some intriguing insights into the work of psychiatric case managers. Latour focuses on the joint production of compliance by both human and non-human components. He begins with the seat-belt apparatus in automobiles. Turning on the ignition without fastening the seat belt leads immediately to a high-pitched alarm and a flashing light on the dashboard, 'Fasten your seat belt!' Breaking this law requires strong will power and a high tolerance for annoyance. Perhaps future engineers will make it impossible to start the car at all without a properly buckled seat belt. In that case,

breaking the law will be mechanically impossible as well as morally incorrect. Latour poses the crucial question: where is compliance located in this socio-technical assemblage? The driver clearly is not an autonomous moral agent who decides on her own whether to comply. As Latour says, the driver cannot be bad anymore. The driver, the car, the seat belt, the engineers, their patents, as well as law makers and the police all act in concert to produce compliance with the rules of the road (Latour 1992, 225–226).

Speed bumps are Latour's other exemplary technology of compliance (Latour 1992, 243–244). Imagine all the possible ways of enforcing the speed limit: a policeman parked on the side of the road, a cardboard cut-out of the policeman propped in the police car, a robot waving a red flag, a road sign announcing the legal miles per hour, and a speed bump. In this progression, the speed bump represents the most radical and most impersonal solution. The effectiveness of speed bumps undercuts the naïve notion that compliance must involve direct persuasion and consent. Indeed, the driver's moment of compliance with a speed bump is not a visible social interaction at all. The 'persuasion' is engineered into the pavement, and the driver does not particularly 'consent'; he just wants to avoid damaging his car. Latour regards the different ways of enforcing speed limits as a chain of delegation. Law-makers delegate certain powers to front-line policemen, and their authority in turn gets delegated to signs and symbols (the speed limit sign) and finally to an inert mechanism. The speed bump is known in the United Kingdom as a 'sleeping policeman', a phrase that brings out its hybrid human/non-human character. Social relations do, in the end, govern the speed bump: its height, its placement, the judgments about its effectiveness, etc. In the process of delegation, however, material objects (tools and machines) come to replace the literal voice of authority. Compliance no longer issues from two human moral agents standing face to face. The call to comply instead pre-exists and constrains any social interaction, and it operates through mundane artifacts.

The built-in features of medication cassettes suggest how this simple tool helps produce pharmaceutical compliance. Most US drugstores offer a range of med cassettes for purchase. The 7-Day Pill Reminder is one brand name for the standard plastic strip with seven compartments for each day of the week. The One-Day-At-A-Time Reminder contains seven plastic strips, one for each day, and each divided into four compartments marked with the time of dosage (morn, noon, eve and bed). The user can detach a single day's strip or keep all seven together in a tray. Detach 'N Go: The Smart Pill Box offers yet more ways to compartmentalize dosages by day and time. The slogans printed on each product command the patient/purchaser, 'Never Forget Again!' and 'Organize Your Medications!' The brand names and advertising slogans hail the purchaser as also the one filling the cassette and enforcing his own compliance.

As a human/non-human hybrid used in community psychiatry, the medication cassette issues the same command, but in a more complicated social field. At Eastside Services, the trajectory of pharmaceutical compliance ultimately begins not with the case managers in the med room, but with the psychiatrist writing the prescription. Other actors take over from that point forward. For the most severely disabled clients, nurses fill the med cassettes, and the case managers carry them to people's apartments. In other cases, case managers help clients fill their own cassettes and then choose among different forms of delivery and surveillance. Certain clients get

their meds delivered every day in four-compartment cassettes, with the demand to swallow the dose immediately. Case managers may also telephone the client later to remind about evening or bedtime doses, or leave the cassette and assume the client will 'self-monitor' (the usual term).

The medication cassette makes possible this entire chain of delegation. It shifts the psychiatrist's knowledge and authority to two classes of actors: both case managers and their clients. In the first link of the chain, the med cassette allows the psychiatrist to extend his expertise into the details of case managers' work routines. Case managers with no medical training can thus reliably deliver the prescribed medication in proper dosing schedule. The next delegation occurs whenever the case manager leaves the cassette in the client's possession. At most community support programs, medication management stretches along a continuum from on-the-spot surveillance of individually delivered dosages to complete 'self-monitoring' by the client. The staff subscribes to a narrative of progress, which encourages clients to move along this continuum as far as possible. Significantly, staff members endorse this narrative despite explicit ideological differences in programs (the biopsychiatric commitment of Assertive Community Treatment or the focus on clients' resources in the Strengths Model studied by Floersch 2002). The ACT model directs staff to titrate services rapidly in response to people's changing symptoms. When clients spiral into a psychiatric crisis, they switch to daily med drops. Staff also move in the opposite direction when they notice a client's long-term stability. During treatment planning sessions, case managers look for opportunities to place more responsibility for compliance in the client's hands. They can reduce med drops, for example, from daily to three days a week, and eventually to every week or month. In this ideal trajectory, the medication cassette allows the act of compliance itself to be delegated from case manager to client.

Medication cassettes, seat belts and speed bumps are all simple artifacts that help produce compliance. The latter technologies, however, operate in only one direction and enforce compliance on a single end-point user (the driver). Their practical meaning is unambiguous: to shape the driver's conduct whether or not she agrees with the law. The med cassette, by contrast, functions as a boundary object that acquires different meanings among its several users (see Star and Griesemer 1989). Undoubtedly, it materializes the authority and knowledge of the Eastside Services psychiatrist, and enables him to oversee the pharmaceutical treatment of 75 people living in a wide swath of the city. But it can also alter the micropolitics of the clinical front-line. Most clients strongly wish to cut down the number of intrusive home visits from their case manager, and the med cassette makes their demand achievable. From the psychiatrist's standpoint, this simple technology enables the maximal control of clients with minimal effort. From the clients' standpoint, (but in line with the standard narrative of progress), it enables their maximal independence from the teams' surveillance.

Medication cassettes also exert an ideological effect foreign to Latour's examples. From the psychiatrist through the case manager and finally to the client, the cassettes ratify the dominant psychiatric view of mental illness and the notion that that each medication targets a specific disease entity (Lakoff 2005). The delivery of pharmaceuticals via med cassettes stands as the *de facto* bedrock treatment at Eastside Services (despite the ACT ideal of comprehensive social and medical services). The prescription gets carefully preserved in separate time and day compartments.

The notion of disease specificity gets reinforced when a case manager conducts 'illness education' while helping her client fill the cassette. The case manager will typically ask clients to state the purpose of each pill that they drop into the proper compartment, and will explain it in lay terms when necessary. All these activities depend on or are provoked by the medication cassette. This technology, therefore, differs appreciably from the speed bump. Hitting the bump hardly encourages drivers to accept the speed limit's legitimacy. But weaving the med cassette into the core gesture of work enlists case managers into the biopsychiatric viewpoint. It also encourages the client to agree that self-compliance is the best (or, in any case, the only) route to less intrusion by the ACT team.

Less intrusion, however, does not mean complete independence. Even long-term stable clients must open their door to the case manager on a regular basis and exchange their old cassette for a new one. The case manager, of course, inspects the cassette for remaining medications. While standing in a client's apartment, she may glance around to find untaken pills, but most clients do not bother to play a cat-and-mouse game with medications. When their case manager notices meds in the old cassette, people simply say they don't like the side effects (such as sleepiness or jitteriness) or they don't need that particular medication anymore. The case manager eventually relays their response back to the psychiatrist at staff meeting. The returned med cassette thus makes non-compliance visible and can quickly lead to an increase in the frequency of home visits. The med cassettes, therefore, operate via a two-way flow of power and knowledge (unlike Latour's exemplary technologies of compliance). In one direction, they enable the substance and ideology of pharmaceuticals to travel from the psychiatrist to the case manager and finally the client. In the other direction, they carry information from people's homes to the staff conference room, and the staff weaves such information into new tactics of compliance.

As a boundary object, exerting strong ideological effects, and mediating a complicated traffic in two directions, the medication cassette is altogether more complex than the seat belt or speed bump. Latour's framework should be used as a provocation, not an analytic straitjacket. The med cassette makes possible the chain of delegation and hence the smooth routines of everyday work. It is a non-human character that enables work, but as Latour suggests, it also imposes behavior back onto the human actor (Latour 1992, 232). In particular, the behavior it imposes on two key users – case managers and their clients – involves them in fundamental contradictions.

The contradiction imposed upon clients recalls the situation in the first ACT program in Madison, Wisconsin (Estroff 1981). This classic ethnography demonstrates how people become immersed in the client role. The stigma of mental illness and the categorical difference from 'normals' are very difficult to escape, even in the absence of symptoms. Estroff argues that the ACT model itself maintains people in this structurally disenfranchised and dependent position. Clients build up a social network consisting of other clients and ACT providers. The providers represent their most stable and longest standing personal connections, which of course clients can maintain only by 'accepting the crazy identity and living the crazy life' (Estroff 1981, 235). Clients are thus caught between accepting and rejecting their stigmatized identity. The tragic contradiction has endured despite all the changes in the implementation of ACT over 25 years. At Eastside Services, the staff decide to trust

certain clients to keep their medication cassette for a week or month at a time. They can thus gradually move out of the routine of home visits, surveillance, and the associated micropolitics of dependency. But when they return the cassette, it provides staff with the visible evidence of their successful or unsuccessful 'self-monitoring.' The instrument of their independence eventually re-immerses them in the client role.

The contradiction for case managers involves a key ambiguity about the scope of their work. The entire mission of ACT either succeeds or fails at the clinical front-line, that is, in the face-to-face encounters between case managers and their clients. ACT originated with a promise to deliver services where clients actually live and to address the full range of their medical, psychiatric, and social needs. The ACT template decrees that case managers serve as a client's single point of contact and broker for resources. Indeed, through weekly meetings in people's own living spaces over a period of years, case managers become acutely aware of the obstacles and deprivation in their clients' lives. But at the same time the med cassette restricts them to a very narrow response. It defines and enables the baseline gesture at the most important scene of work. It provides a clear recipe for action – filling and delivering the cassette, watching the client consume medication, and later scrutinizing it for missed doses – but this recipe hardly satisfies their clients' limitless needs. The med cassette enables case managers to act as the prosthetic extension of the psychiatrist, but the 'med and money drop' continually threatens to become the case managers' major activity. Not only does the med cassette silently ratify biopsychiatric ideology. It also helps define med delivery as the baseline activity of psychiatric case management, despite the broader conception in the original ACT model.

In conclusion, this paper explores the front-line clinicians' horizon of action as well as the history and background conditions of work. To regard compliance as an assemblage made up of heterogeneous parts stays true to the both the experience-near and experience-far characteristics of community treatment of the mentally ill. Case managers must orchestrate this assemblage even as they find themselves slotted as yet another of its components. Their knowledge of how it operates is practical, not theoretical. But they nonetheless have deep experience with its contingencies and rough edges. They express their situated knowledge in various ways, for example, when they chafe against their narrow room to maneuver under the psychiatrist's authority and when they complain about their limitless responsibility to clients and the meager resources at their command. Case managers' difficulty in using the assemblage of compliance merits a separate analysis (Brodwin 2008) that properly starts with the argument developed here. Neither fully social nor fully technical, compliance in community psychiatry brings together actors with competing interests in clinical settings that have their own complicated genealogy. At the center of analysis stand the human/non-human hybrids – not only the medication cassette, but also the syringe and purely paperwork tools, such as the treatment plan and commitment order – that enter and enable clinicians' routines. Bringing into focus all of these components suggests the stakes of compliance for those engaged daily in producing it.

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Notes

1. The average length of stay for mental disorders has consistently decreased since the 1970s (Goodwin 1997, 93). The average length was 7.0 days in the United States for 2006, at the low end for developed nations (US Department of Health and Human Services 2008), compared with the 1995 statistics of 21 days in Switzerland and 33 days in the Netherlands (Sturm and Bao 2000) and 44 days in Germany (Alonso and Kessler 2008). Several variables make direct comparisons difficult. Criteria for admission and discharge differ across countries, and length of stay statistics may measure psychiatric hospitals, psychiatric beds in general hospitals, or both. Nonetheless, most developed countries are firmly in the 'post-asylum' era of mental health care, with continuing reductions in length of stay and number of mental hospitals (Van Os and Neeleman 1994).
2. For the history of ACT in the United States, see Dixon (2000) and Thompson, Griffith and Leaf (1990). For its diffusion to Europe, see Burns et al. (2001) and for Japan, Ito (2009).
3. Participant observation research took place for two years at an intensive case management program for people with severe mental illness. Although based on the principles of Assertive Community Treatment, 'Eastside Services' does not meet the formal fidelity standards for ACT currently used by certain states to authorize, evaluate and fund community psychiatric services (see Teague, Bond and Drake 1998). The author attended 120 staff meetings and accompanied six case managers, for approximately four months each, on their daily visits to clients' homes and meetings with psychiatrists, lawyers and family members. The author observed ten sessions of counseling and medication management between the consulting psychiatrist and clients. Other sources of data include 30 semi-structured interviews: 20 with case managers, five with the program director, and five with the psychiatrist. Fieldwork involved documenting both the ongoing moral commentaries made by clinicians in the midst of seeing clients and the use of more abstract ethical language during staff meetings and research interviews. The author also attended training sessions for new case managers run by the state Department of Mental Health, as well as four regional continued education seminars for social workers about ethics and boundaries. Transcribed interviews and fieldnotes were coded with Nvivo 2.0 software for qualitative data analysis. Institutional Review Board approval from the University of Wisconsin-Milwaukee was obtained before beginning research.
4. The most widely adopted programs include Strengths-Based Case Management (Rapp 1998), Assertive Community Treatment (Stein and Santos 1998), and Psychiatric Rehabilitation (Anthony 2002). Each emerged from an academic medical center; became institutionalized through training manuals, fidelity standards, and national organizations; and is regularly evaluated through controlled, empirical research appearing in *Psychiatric Services*, *Psychiatric Rehabilitation Journal*, *Community Mental Health Journal*, among other publications.
5. Allness and Knoedler's handbook is published by the National Alliance for the Mentally Ill (NAMI), the major US lobby/advocacy group for people with severe mental illness. The handbook clearly articulates the biological psychiatry perspective endorsed by NAMI: 'Psychotropic medications have been and will continue to be the primary means of treatment for the symptoms of severe and persistent mental illnesses . . . The ACT team not only provides up-to-date psychopharmacological treatment, but also excels in helping clients consistently adhere to their prescribed medication regimens.' This handbook emphasizes the ongoing need for pharmaceuticals during the remission phase: 'In recent

years evidence has also accumulated that the advantages of these medications are often greater when they are prescribed continuously (rather than intermittently) and when they are used as early as possible after the onset of illness... Without continuous and early treatment, people with these disorders are at greater risk of relapse and are more likely to develop persistent symptoms.' (Allness and Knoedler 2003, 109–110).

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