HHS Public Access

Author manuscript

Wellbeing Space Soc. Author manuscript; available in PMC 2023 April 18.

Published in final edited form as:

Wellbeing Space Soc. 2021 ; 2: . doi:10.1016/j.wss.2021.100035.

Clinical geography: A proposal to embrace space, place and wellbeing through person-centered practice

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Abstract

This essay envisions how geography can operationalize nuanced understandings of space and place to enrich the lives of individuals across the lifespan. We propose a focused integration of geography into person-centered practice: a clinical geography dedicated to working directly with people to promote optimal physical and mental health outcomes and wellbeing. Our proposal integrates spatial modifications to facilitate access and utility, behavioral interventions to maximize effectiveness in using space, and therapeutic engagement to nurture a deeper sense of 'being in place' that enhances wellbeing and quality of life. This focus is timely given societal instability and precariousness resulting from incongruous person-environment situations. In addition to investigating, explaining, and critiquing hazardous and inappropriate conditions, geographers might also directly and more immediately intervene with people who find themselves in such situations.

Keywords

Person-in-environment intervention; Space; Being in place; Health; Geographic knowledge translation

1. Introduction

We are witness to an era of instability and increasing precariousness. From home-and neighborhood-level insecurities to vulnerabilities generated by climate change (Thomas et al., 2019), worldwide pandemics (Ingram, 2016, Neely and Lopez, 2020), labor market precarity (Harris and Nowicki, 2018), and sociopolitical upheaval across the globe (Volpi and Clark, 2018), the factors contributing to precarious person-in-place situations are heterogeneous in scale and genesis. There is an urgent demand to understand human

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Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

needs and experiences in the context of dynamic and unstable social, economic, political, and natural environments. Such understanding provides an opportunity for geographers to positively and immediately influence the lives of individual vulnerable people. Filtering down to the scale of the individual, there is a level of precariousness in nearly every situation as the demands of each person and their environment rarely completely coincide. They are constantly in transition as situations and people change. Addressing this tension is crucial for wellbeing and quality of life. In complement to structural critiques and interventions, there are opportunities for geographers to more immediately intervene with people in hazardous, inappropriate, and fluid contexts; and work directly with individuals to promote physical and mental health. We envision a new lens of clinical geography dedicated to the study and practice of applying current geographical knowledge and insights to counseling and decision-making interventions at the scale of the individual to promote health and wellbeing.

Nearly twenty years ago, Woods (2002) questioned whether the social sciences (and geography in particular) could truly hear the struggles and wishes of the disadvantaged through the theoretical noise. In describing the destruction of Black communities across America, Woods (p. 63) wrote:

> My encounters have forced me to seriously question a social science literature that is, for the most part, seemingly incapable of hearing the cries emanating from the soul of this nation. The same tools that symbolize hope in the hands of the surgeon symbolize necrophilia in the hands of the coroner. Have we become academic coroners? Have the tools of theory, method, instruction, and social responsibility become so rusted that they can only be used for autopsies?

We believe that geographers can contribute to person-centered practices by providing support for persons during times of vulnerability, risk, and change. In addition to investigating, explaining, and critiquing precarious and hazardous situations and informing upstream interventions of sociopolitical and structural determinants of health and wellbeing, geographers can also positively intervene with people who find themselves in such situations; they can seek to do something.

Framed in this context, we believe the time is propitious to re-engage in deeper applied involvement of individual geography within and beyond clinical settings. This widens geography's arsenal of approaches at the micro scale in complement to macro scale research and structural intervention. This area of geographic contribution would be dedicated to the practice of working directly with persons to promote optimal physical and mental health outcomes through alterations to their environment, behavioral change, and enhancing their potential to live in harmony with place. This specialization could address life course transitions that cause person-place relationships to shift, such as having a child or retiring. In recognizing the constant fluctuation between being 'in' and 'out of' place (Rowles, 2018), clinical geography's goal is to enable people to feel 'at home', purposeful, and psychosocially supported in everyday contexts. In this article, we identify opportunities for geographers to critically operationalize research advances to enhance quality of life through applied person-in-environment interventions. Our aim is to inspire innovative and progressive ways of thinking and acting to expand the role of geography.

2. Toward clinical geography

We propose clinical geography as a lens focused on intervening in the uniquely geographical problems and opportunities faced by individual people as they seek to cope with precarious situations and optimize their health and wellbeing. Andrews and Shaw (2008) first used the term ‘clinical geography’ to describe the potential for geographic research to describe, support, challenge, and guide clinical practice. Interviews in the United Kingdom demonstrated how nurses actively manipulated clinical spaces as part of their everyday therapeutic practices. The authors expressed their hope that “geography might one day stand as an equal alongside other disciplines and perspectives currently used in nursing research – such as sociology, psychology, anthropology, economics – in providing its own unique social scientific contribution to evidence-based practice” (p. 471). This statement remains largely a hope as Western clinical practices minimally use geographic evidence and perspectives, and rarely—if ever—explicitly. Medical problems are often spatially constructed, yet their spatiality is rarely regarded as a viable object of intervention (Muller, 2015). Rowles (2018) further advocated for a clinical geography to support and reinforce interventions that sustain and enhance being in place for individuals and populations (p. 208). Our intent is to re-engage geographers and reinvigorate this effort. This lens can complement and advance holistic care and health promotion within and beyond clinical settings.

“Clinical” involves direct observation and treatment of people based on observable and diagnosable symptoms. The word stems from Greek *klinikē*, meaning “bedside” (Merrian-Webster Dictionary 2020). But health and wellbeing does not occur in a vacuum devoid of context. Rather, building on Chris Philo’s (Philo, 2000) interpretation of Michel Foucault, our view of the clinic extends beyond the body and the bedside to embrace a “generalized medical [and social] consciousness, diffused in space and time, open and mobile, linked to each individual existence, as well as to the collective life of the nation” (p. 31 (Foucault, 1994)). The fundamental premise of clinical geography is a focus on inquiry and intervention at the scale of the person and their immediate environment.

Each person is unique in terms of history, abilities, needs, and preferences. Their relationship with surrounding environments is constantly changing and polygamous across space and time (Matthews and Yang, 2013). Based on this premise, we define clinical geography as the study and practice of applying current geographical knowledge and insights to counseling and decision-making interventions to enhance a person’s wellbeing. Clinical geography harnesses increasingly nuanced theories of place to engage people in optimizing their sense of ‘being in place’ (Rowles, 2018, Seamon, 2018). It is a lens that incorporates insights from health and medical geography, such as therapeutic landscapes (Bell et al., 2017, Finlay, 2017, Gesler, 1992, Nagib and Williams, 2018, Nagib and Williams, 2016, MacKian, 2008) and geographies of care (e.g., (Herron and Skinner, 2013, England and Dyck, 2011, Milligan and Wiles, 2010, Power, 2008, Parr, 2003)). It synthesizes broader analytical frameworks across human geography, such as geographic theories of place attachment (e.g., (Rowles, 2018, Phillips et al., 2011, Wiles et al., 2009, Rosenbaum et al., 2007, Finlay et al., 2018)), mobility (e.g., (Cheng et al., 2019, Blunt, 2016, Loebach and Gilliland, 2016, Loebach and Gilliland, 2014, Howell et al., 2017, Finlay and Bowman, 2017)), labor and work (e.g., (Strauss, 2018, Castree, 2007, Ellis et

al., 2004, Dyson, 2008)), food and diet (e.g., (Guthman, 2011, Shannon, 2015, Sonnino, 2016, Bosco et al., 2017, Pettygrove and Ghose, 2018, Reisman and Fairbairn, 2020)), and the home (e.g., (Dyck et al., 1998, Williams, 2002, Imrie, 2004, Nowicki, 2014, Liu, 2020, Muñoz, 2017)). Operationalizing diverse geographic insights represents a powerful approach to harnessing translational science (Onken et al., 2014) in supporting, empowering, and enhancing personal health and wellbeing.

3. Person-in-environment focus

Our proposed clinical geography integrates a long history of interdisciplinary spatial thinking with recent technological advances (e.g., fast geographic data (Miller, 2018)), and growing sophistication of geographic research on space and place. Longstanding geographic attention advances understanding of the complex reciprocal relationship among people, space, and place. In the 1970s and 1980s, behavioral geographers built on Kurt Lewin's (Lewin, 1936) seminal person/environment ecological equation: B=f(P.E), where behavior (B) is a function of the person (P) and environment (E). Working in parallel with scholars in related fields, geographers developed a series of refinements to this fundamental proposition —moving from stimulus-response to transactional and phenomenological perspectives emphasizing the inseparability of the two components (e.g., (Aitken, 1992, Buttimer, 1976, Hauge, 2007, Law et al., 1996, Lawton et al., 1973, Rowles, 1978, Seamon, 1979, Wapner et al., 1973)). Cutchin's (1999) work on place integration, for example, builds on the transactional focus manifest in this work and the pragmatism of John Dewey. Pragmatists argue that philosophy should both originate from and concentrate on 'experience' – what people "do and suffer, desire and enjoy, see, believe, imagine" (p. 10 (Dewey, 1989)). Experience is a comprehensive activity involving persons and their environments in a continually dynamic world. Cutchin (Cutchin, 1999) proposes the concept of 'place integration' as a form of geographic pragmatism to understand the situational nature of place and place experience. Events, situations, and transactions embedded in places are emergent: while rooted in the past, they have indeterminate and open-ended futures. Pragmatic action therefore asserts that "persons or groups use intelligence, choice and creativity" (p. 268 (Cutchin, 1999)) to deal with disjuncture, fragmentation, and conflicts disrupting the continuity of place.

Building on this perspective, clinical geography could advance real-life applications of geographic pragmatism. This theoretical perspective not only blurs person/environment boundaries but also conceptualizes every person-in-environment relationship as situational, contingent, and constantly in flux. Clinical geographers could seek to intervene in these dynamic situations. In this context, as pragmatists like Cutchin and Dewey would argue, it is important to drop the pretense of certainty and stability and substitute "a demand for imagination" (p. 34 (Rorty, 1999)) in dealing with uncertain situations. Here we see opportunities to apply David Harvey's (Harvey, 2006) notion of the 'geographical imagination' at the scale of personal intervention.

The geographical imagination builds upon C. Wright Mills' (Mills, 1961) concept of the 'sociological imagination', an approach that understands social situations and histories in terms of their meaning for individual lives. Harvey (2006) brought geography and spatiality

into the mix of biography and history to enable “the individual to recognize the role of space and place in his own biography, to relate to the spaces he sees around him, and to recognize how transactions between individuals and between organizations are affected by the space that separates them” (p. 24 (Harvey, 1973)). Beyond theory construction (Norton, 1989), this spatial consciousness enables creative manipulation and use of spaces. Clinical geography offers opportunities to exercise and employ geographical imagination in real-life situations.

We envision clinical geographers working directly with clinicians and individuals to creatively manipulate their inhabited spaces and uses of these spaces. Such interventions would focus on both a specific person(s) and their specific environment(s). Within this rubric, clinical geography engages people in working toward a higher goal of ‘being in place’: attaining a feeling of belonging, involvement, purpose, and meaningful connection (Place, 1976, Hayden, 1995, Seamon et al., 2008). This involves intervening in a unique, situation-specific blending of two fundamental elements: *personal place identification* and the *identity of places* (Fig. 1).

Personal place identification is an individual trait reflecting the unique way in which people viscerally experience and react to an environment (Rowles, 2018). Shaped by physiology, life history, personality, and both preferences and aversions that evolve with environmental experience, personal place identification is the propensity to encounter and experience a specific environment in a distinctively personal way. For example, one person may feel uncomfortable in a crowded room while another thrives in such a setting. This provides the potential for unique person-in-place relationships. The identity of places arises from the way in which environments are designed, inhabited, and modified over time. From the grandeur of a cathedral imbued with cultural meaning over generations to a set of mundane park benches where local residents gather to converse, locations assume an identity that is independent and transcendent of individuals. Personal place identification and the identity of places intertwine during ongoing processes of habitation and engagement in daily life. Over time, this interplay often facilitates place attachment: rich cognitive and affective ties to places, a sense of insideness (Rowles, 1983), and very specific ideas of ‘my place’ and ‘my home’ (Finlay et al., 2018).

The experience of being in place is always situational, contingent, and in flux. Positive congruence between person and environment can result in a comforting and supportive sense of being in place that is conducive to wellbeing. Alternatively, discordance between the two elements can result in disjuncture; alienation, isolation, hostility, and discomfort (Place, 1976, Seamon et al., 2008, Rowles, 1983). In reality, people often inhabit environments somewhere along a continuum from being entirely ‘in place’ to entirely ‘out of place’ (Rowles, 2018). There is a level of precariousness in nearly every situation as the demands of person and environment rarely completely coincide. They are constantly in transition as situations change.

Addressing concerns about being out of place may occur on two levels (Fig. 2). At a broader macro scale, community engagement can address incongruent person-environment situations. This can involve (re)shaping the identity of place by first identifying and critiquing current conditions and their structural causes. Social inquiry through public

participation, imagination of alternative possibilities, processes of citizen deliberation, and the implementation of physical and social reconstruction strategies can address problematic situations (Rowles and Cutchin, 2021). Much of this approach to community problem-solving falls under the traditional domains of geography.

Here our concern, and the unique focus of clinical geography, is with a second level of response: personal intervention. This novel approach requires the identification of individualized person-in-environment challenges and opportunities, processes of personal inquiry and consultation to determine an individual's priorities and preferences, and mutual engagement among people and those who are important to them. Personal intervention could ideally be combined with community engagement approaches to ameliorate incongruence in person-place relationships and enhance wellbeing at both the individual and societal scale. This multi-scalar thinking, a strength of geography, involves the ability to critically consider and intervene in the unique situations of individuals nested within larger contexts.

4. Operationalizing clinical geography

Given this theoretical context, how do we operationalize clinical geography? A multitude of opportunities can be considered on three levels (Fig. 3).

At a basic level, a clinical geographer could help optimize the accessibility and configuration of spaces for individuals. This approach complements traditional clinical fields (e.g., clinical psychology, social work, occupational therapy), by explicitly integrating and emphasizing spatial interventions. Clinical geographers could operationalize geographic theory such as critical approaches to access and disability (Crooks et al., 2008), environments of learning (Bates, 2019), geographic information science (Miller, 2018), sustainable urban design (Di Ludovico et al., 2020), and community resilience and recovery (Burton, 2014).

At a second level, clinical geography could provide behavioral and counseling support to optimize the use of the modified environments. This level synthesizes strands of geographic endeavor including person-environment behavior (Aitken, 1992), children's mobility (Ayllón et al., 2020), negotiated urban encounters (Watson, 2006), gendered boundaries of activity (Coen et al., 2019), work and care (Milligan and Wiles, 2010, McDowell, 2004), performativity (Thrift, 2008), and use of virtual space (Malecki, 2017).

A third level, more transcendent and manifesting a geographical imagination, involves facilitating the self-actualization of being in place. While clinical practices are increasingly sensitive to issues of space (particularly in terms of mobility and access) and may implicitly incorporate some elements of place within health interventions, understanding and optimizing being in place are not the primary foci of existing interventions. This level of clinical geography embraces critical analytic frameworks such as geographic perspectives on home (Aman and Yarnal, 2010, Brickell, 2011), emotion (Valentine, 2003, Davidson et al., 2005), identity (Godkin, 1980), embodiment (Longhurst, 1997, Simonsen, 2012), emplacement (Pink, 2011, Finlay, 2021), fear and vulnerability (Ingram, 2016, Martin, 2011), and precarity (Waite, 2009).

A pragmatist approach to achieve wellbeing through (re)establishing being in place represents rich new terrain for applied research. Clinical geography may advance the ways we *do* geography and facilitate progress in the discipline (Castree et al., 2020). Below we explore three illustrative domains of clinical geography as manifest in different stages of the lifespan with examples of potential interventions.

4.1. Early life

Envision a parent seeking consultation on structuring the home for optimal early life development, health, and wellbeing. The perspective of clinical geography provides an umbrella to integrate and prioritize varied early-life experiences in which space and place are integral components. At a basic level [Level 1 of Fig. 3], consultation focuses on spatial elements of functionality such as making the residence toddler- and child-safe through electrical safety plugs, stair gates, placing hazards out of reach (e.g., window cords, medicines, cleaning supplies, harmful houseplants), and padding sharp furniture corners (American Academy of Pediatrics 2009). Layouts of living space can be optimized for behavioral activities that advance social, emotional, cognitive, and physical development (Maitland et al., 2018). Here the focus is on designing spaces and suggesting activities that nurture indoor and outdoor play, artistic expression, physical manipulation, and inquisitiveness. This can be as simple and low-cost as using an old bedsheet or cardboard boxes to make a fort. Transforming indoor and outdoor spaces enables children greater freedom to live, learn, and grow together (Bates, 2019).

By itself, creating a supportive physical and social environment may not be sufficient—as evidenced by ignored toys and empty playgrounds. Interventions to educate and encourage the optimal use of created spaces are necessary [Level 2 of Figure 3]. Collaborative strategies might focus on reconciling the tension between security and adventurousness as infants and children venture forth into progressively more challenging spaces and away from protective parental custody (Balint, 1955). Interventions could explicitly recognize the expanding lifeworld (Seamon, 2018) of a teenager and evolving needs for personal control and freedom. Visser (2019) notes that young people's socio-spatial behavior is the outcome of active negotiation between parents and child. There is a balance between parental trust and fear, just as young people seek a balance between autonomy and authority.

Clinical geography entails developing imaginative strategies to help individual children and youth engage in discovery, creativity, adventure, restoration, and growth as a part of their development. In some cases, the best approach may be encouraging a child to walk to the bus stop or school independently (Ayllón et al., 2020), or play with others in a playground, park, or 'wild places' (Nabhan and Trimble, 1994) uninterrupted by parental interference. This enables opportunities for creative and secretive spaces of childhood that young people can adapt and transform imaginatively for play and to gain some sense of control (Watson, 2006). Encouragement to use outdoor spaces in more imaginative ways provides not just physical benefits, such as running, swinging, jumping, and climbing but also sensory and interpersonal advantages as well: freedom to explore, learning to cooperate, and experiencing nature (p. 10 (Bates, 2019)).

At a more sophisticated level of geographical imagination [Level 3 of Fig. 3], a clinical geography perspective empowers children and youth during family sessions to share ideas and collaboratively decide on action steps (Hart, 1992, Shier, 2001). This can help nurture existential insideness and belonging – a condition of deep, unselfconscious place immersion. Families migrating for employment or other reasons might confer about strategies to reduce strangeness and alienation in the new place and enhance opportunities for agency and belonging (Siagian, 2019, Zúñiga and Hamann, 2020). This includes maintaining familiar routines and family traditions (e.g., Friday pizza night), and personalized decorations (e.g., putting up glow-in-the-dark astrology stickers or transferring favorite musician posters on the ceiling). In long-distance family situations, such as a parent deployed or migrant workers living seasonally abroad, communication technologies (e.g., messaging and video calls) enable virtual geographies of connection and inclusion in cyberspace unencumbered by physical distance (Malecki, 2017). A clinical geographer's perspective would be valuable in working with a family over time as person-environment dynamics change to nurture place immersion in an increasingly mobile, hypermodern world. The ultimate goal is to facilitate for each infant, child, and adolescent an ongoing sense of being in place as they evolve developmentally and encounter new environmental contexts.

4.2. Mid life

In adulthood, the perspective of clinical geography can address person-place situations ranging from quotidian to crisis. Following a natural disaster such as fire, flood, or tornado, clinical geographers might aid disaster relief efforts to help rebuild and rehabilitate [Level 1 of Fig. 3]. Post-disaster recovery and resilience is a multifaceted process encompassing social, economic, institutional, infrastructural, community-based, and environmental dimensions (Burton, 2014). But recovery is also a personal process. Here, the task is resurrecting, restoring, or even remaking place for the individual in a way that preserves its identity while recognizing changed circumstances and mitigating against the recurrence of harm in future disasters. A clinical geographer could help re-establish or modify a sense of place that reflects the new situation, and perhaps even enable someone to 'bounce back better' by using the opportunity to optimize home or workplace layout, functionality, comfort, and routine.

A clinical geography perspective facilitates behavioral interventions to help cope with altered lives during or following a crisis such as the COVID-19 pandemic [Level 2 of Fig. 3]. At the time of writing, millions of Americans are sheltering in place: only leaving home for essential purposes of employment, grocery shopping, and exercise (Mervosh et al., 2020). People around the globe are adjusting to physical distancing and working from home. A clinical geographer working in collaboration with health professionals could provide assistance to persons staying at home for prolonged periods, in addition to those strictly confined to a room or residence in quarantine. Residences can be reconfigured to create distinct spaces for work and learning separate from those used for sleeping, eating, socializing, and relaxing. Daily life can be altered and new routines developed, including video calls with family and friends in lieu of in-person visits. Family member territories might be established to limit the potential for tension and conflict that may result from enforced crowding in a confined space, including separation strategies for families sharing

smaller and noisier high-rise apartments (Kerr, 2018, Nethercote and Horne, 2016) or mobile homes (Aman and Yarnal, 2010).

Clinical geography facilitates interventions with individuals that encourage healthy behaviors and enable optimal use of spaces. Such assistance might be particularly valuable for persons grappling with physical or mental health conditions. For example, evidence suggests that a range of lifestyle and environmental factors are involved in the pathogenesis of depression. These include diet, physical activity, relaxation, sleep, socialization, smoking, and alcohol (Sarris et al., 2014). A clinical geographer could work with someone to beneficially modify their behavior through environmental 'nudges' (Reid and Ellsworth-Krebs, 2018). At-home strategies might include setting exercise equipment in a convenient corner of the home; or updating the bedroom to improve sleep quality (DuBose and Hadi, 2016, Lan et al., 2017, Pyrke et al., 2017). Beyond the threshold, the clinical geographer could suggest social neighborhood 'third places' outside of work/school and home to frequent, such as a coffee shop or community recreational sports league (Oldenburg, 1999, Finlay et al., 2019).

Clinical geographers may employ sophisticated geographic approaches to help people struggling with mental health conditions [Level 3 of Fig. 3]. Godkin (1980) explored place-based therapy with alcoholics who felt distressed and alienated. This "therapeutic technique involved patients recalling and describing in chronological sequence significant places in their lives–e.g. orphanages, foster homes, homes of family, friends, relatives, schools, and work places" (p. 79 (Godkin, 1980)). Given the ubiquity of smartphones, tablets, and online multimedia, a clinical geographer could view and discuss digital photos of significant places from a person's life where they felt securely in place or uprooted and out of place. Going through this process facilitates rediscovering and re-examining positive person-place situations, while cathartically addressing potentially-suppressed negative contexts (Godkin, 1980). This process can be reinforced through contemporary technologies including virtual reality headsets (Brown, 2019), reality caves (Phillips et al., 2013), and real-time video connections (Reynolds et al., 2018). Technology can immerse people more deeply in places of both the past and present unencumbered by limitations of physical geography. We recognize professional limitations if clinical geographers are not also licensed to practice psychotherapy. But working in a consultative role with other clinicians, they might help people through an autobiographical approach to place therapy that complements and extends traditional approaches.

4.3. Later life

At the end of the lifespan, clinical geography can support older adults adjusting to aging-associated changes [Level 1 of Fig. 3]. One relevant domain is consultation on residential and care trajectories. A clinical geographer could assist in personal decision-making on how, when, and where to live in later life. This might involve guiding people through protocols designed to help them recognize, reconcile, and act upon changing functional needs and personal preferences. They might research and call housing authorities for availability and waitlist lengths in subsidized apartments, assisted living, and nursing homes to help people find appropriate and affordable places to live. Given widespread desire among older adults

to age in place in familiar homes and communities (Kan et al., 2020), a clinical geographer might help rearrange furniture to achieve environmental centralization (Lawton, 1985). A homebound person could be advised to place a comfortable chair by the window to watch the outside world (Rowles, 1981). Many low-cost spatial interventions reduce fall risk, such as putting a chair or grippy mat in the shower, removing hazardous rugs, and arranging home maintenance services to limit clutter. Remote activity monitors could be placed inside a home to track the activities of a person with dementia and alert caregivers to abnormal behaviors or risks such as wandering or falls (Gaugler et al., 2019). While ensuring appropriate privacy, clinical geographers could capitalize on the accelerating rate of technological innovation to enable vulnerable older adults to remain longer at home living independently (Brown et al., 2016).

Moving to Level 2, the approach of clinical geography can guide an older person to make behavioral adjustments for safety and security, while at the same time sustaining implicit spatial familiarity, habits, and muscle memory that enable people to maintain familiar routines and remain embedded in familiar settings (Shusterman, 2011). Should relocation become necessary, a clinical geographer might assist in decision-making about where to move as well as the process of moving and coping with potential stressors. Geographers are already familiar with multi-scalar considerations in relocation decisions including proximity to family, health services, greenspace, arts and leisure, and public transit. A clinical geographer could assess a person's unique geographic needs coupled with financial situation and preferences. Acknowledging that place attachment varies widely by individual, person-centered counsel can enable individuals to feel safe and comfortable, to access services, feel socially connected, and meaningfully engage in daily life (Finlay et al., 2018, Finlay et al., 2019). This includes strategies to get outside the home; perhaps working with someone with memory loss to set distinct landmarks to orientate along routes travelled by foot, bus, and car (e.g., particular shops, schools, churches, bridges). Sessions could involve strategically mapping routes with positive features (e.g., greenery, traffic-calming, curb cuts and building ramps, places to sit and rest, scenic views, highly-visible signage) and minimal negative features (e.g., potholes, broken fences, derelict areas, lack of sidewalks, noisy traffic) (Bigonnesse et al., 2018, Sheehan et al., 2006). Scenario planning could help older adults navigate daily life given fluctuating physical and cognitive abilities.

A potent contribution of clinical gerontology is its potential to help older adults achieve and sustain a sense of being in place [Level 3 of Fig. 3] as circumstances change and environmental vulnerability increases (Rowles, 2018). According to Golant's (2012, 2018) theory of residential normalcy, older adults strive for residential comfort (settings that are pleasurable, appealing, comfortable, and enjoyable with minimal everyday hassles) and residential mastery (settings where they feel competent, empowered, and in control of their lives and environment). A clinical geographer could recognize and nurture residential normalcy through geographic counsel and strategies that enable people to achieve a sense of being in the *right* place during distinct phases of aging. This might include prolonged assistance along a long-term care trajectory from private housing through assisted living to nursing home and perhaps hospice. The clinical geographer could ease transitions. They might help a person and family members sort through possessions to ensure that items transferred between places (e.g., family photographs, treasured mementos) most strongly

sustain and reinforce identity (Finlay et al., 2018, Ekerdt et al., 2004, Luborsky et al., 2011). This could facilitate a sense of returning home and stimulate comforting memories, particularly for someone with dementia (Chaudhury, 2008). A clinical geographer could assist in ensuring that someone's final place of life is as comfortable and meaningful as possible. This might include organizing final trips to favorite places (such as a café, park, or site of worship), orienting the bed to maximize window views and morning sunlight, and arranging visits from family and friends at times to minimize fatigue and avoid post-medication hazy periods. A clinical geographer could draw upon someone's geographic life history to maximize the comfort and meaning of end-of-life surroundings and activities.

5. Creating a clinical geography: some implications

For clinical geography to emerge as a useful lens, it is essential to *work collaboratively with overlapping disciplines and applied fields*. Adopting multiple lenses ranging from history, sociology, and anthropology to psychology and occupational science enables more comprehensive understanding and appropriate person-in-environment interventions. A geographical lens can strengthen clinical practice, and enhance the movement toward translational science (Onken et al., 2014) and team-oriented care. For example, health care teams increasingly include a physician, nurse, psychologist, physical therapist, occupational therapist, social worker, pharmacist, and spiritual practitioner (Saint-Pierre et al., 2018). The role of the clinical geographer as part of the team is to complement rather than duplicate, and to act as a consultant to strengthen holistic care. As a first phase to more explicitly integrate this perspective, clinical geography materials and training might be incorporated into existing clinical programs and continuing education to emphasize the importance of the socio-geographic context of patients in enhancing care and wellbeing. Systematically employing a geographical lens can improve the effectiveness of medical intervention. As this value becomes more widely recognized, it may ease the path to incorporate clinical geographers as formal members of health care teams.

The potential emergence of clinical geography requires *taking geographers' expertise beyond the academy in new ways* to provide practical support to individuals. Geographers have made numerous contributions to urban planning and environmental sciences, in addition to advancing cartographic and geographic information science applications. Expanding to incorporate a clinical geography would entail more person-focused interactions. It involves engaging in interpersonal dialogue and research on the site, scale, and perspective of the person. Ultimately, such service to help individuals through person-in-environment interventions is, by extension, a service to society. Such initiatives complement existing mainstream efforts in geography to critique and address structural determinants of poor health such as environmental racism, food deserts, and economic precarity.

Progress toward a viable, socially useful clinical geography involves *harnessing existing tools and creating new ones* to provide a battery of procedures and instruments to support practice. This includes developing and refining standardized assessment protocols and inventories. The housing enabler instrument, for example, allows clinicians to assess housing accessibility and usability in the context of an individual's personal capabilities and limitations (Lien et al., 2015). We envisage an arsenal of assessment tools including,

but not limited to, behavior measurement devices (e.g., GPS tracking and video surveillance technologies), environmental simulation tools (e.g., video visits comparable to those used by realtors and architects to virtually tour a prospective residence), place recall therapeutic techniques, environmental satisfaction scales, and residential planning and care trajectory protocols. Making these instruments publicly available in online and hard-copy format, as well as easily understandable to diverse audiences, would make them more accessible and approachable. Websites, booklets, pamphlets, and information sheets on key geographical considerations—similar to the brochures found in many physician waiting rooms—could be filled with relevant information on topics that intuitively convey the relevance of space and place to health and wellbeing. Clinical geographers could host public workshops and talks, and engage in clinician training and consulting, to further convey person-in-environment principles and opportunities for intervention and modified practice.

The emergence of a clinical geography requires *professionalization of this specialization* and potentially new forms of credentialing. This might include training workshops, certificates, degrees, and even some form of accrediting body to ensure that appropriate standards are maintained. A telling although limited precedent is the emergence and growing popularity of credentialing for aging in place specialists. Under the aegis of the National Association of Home Builders, one can now become a Certified Aging-in-Place Specialist. We envision that education and specialization in clinical geography would involve far more than this, as demonstrated by the breadth of possible examples in the previous section. A clinical geography curriculum could include in-depth understanding of space and place and the manner in which they evolve over the lifespan, training in methodologies to monitor and measure an individual's use of space and assess their ties to place, courses on person-in-environment interventions and strategies, and instruction in processes of interpersonal communication and direct interaction.

The clinical geography we envision is *inclusive*. Clinical geographers would engage in direct service with a diversity of constituencies including people who are impoverished, transient, disabled, isolated, physically and mentally unwell, or otherwise marginalized and excluded. Socioeconomically marginalized individuals more often inhabit and endure degraded, under-served, and unsafe environments (Sallis et al., 2011). Clinical geographers could support vulnerable populations who are inhabiting incongruous and harmful contexts through collaborative and creative methods of facilitating positive change. While this article is written from a primarily Western (US) perspective, we hope for the lens of clinical geography to be adapted across international contexts. It may be transformed to complement non-Western health and care practices in tailored efforts to support wellbeing, especially in areas with high levels of precarity and vulnerability.

This raises *the critical issue of reimbursement*. While pro bono and private pay are likely to be initial options, we hope that clinical geography would expand to public reimbursement options—perhaps through Medicare or Medicaid in the United States, the National Health Service in the United Kingdom, the Gesetzliche Krankenversicherung in Germany, and other forms of public insurance. Charitable programs and publicly funded programs could enhance access. There is precedent in the history of other interventions, including the hospice movement and occupational therapy, where reimbursement gradually transitioned

from solely private pay and charitable support to reimbursement through public funding as the value of the service became more widely recognized by society. We aspire to a future where clinical geography's person-in-environment services are viewed as 'medically and socially necessary' and thus publicly funded.

Expanding horizons to embrace a person-centered clinical component requires thoughtful *ethical consideration of practice*. The Council of the American Association of Geographers (American Association of Geographers. Statement of Professional Ethics 2009) statement on professional ethics, Canadian Association of Geographers' Statement on Collegial Conduct and Respectful Exchange (Canadian Association of Geographers 2019), and Royal Geographical Society Development Geographies Research Group Ethical Guidelines (Development Geographies Research Group 2003) provide potential starting points. While these statements provide broad consideration of many pertinent issues, such as respect for individuals and compliance with Institutional Review Board protocols and guidelines, it is advisable to review the degree to which the current document fully embraces ethical dimensions of clinical geography. For example, it might be appropriate to develop an oath of office for clinical geographers that explicitly acknowledges the uniqueness of individuals, pledges to preserve personal privacy, and adheres to principles of beneficence and social justice in practice. There are deep ethical considerations in this endeavor, such as prioritizing individual environmental adaptation and behavioral modification in problematic circumstances and unjust systems. We do not view clinical geography as antithetical to tackling broader social justice goals. Rather, many dimensions of social injustice are manifested in individual experience and can be addressed in parallel (as we suggest in Fig. 2). Person-centered research and intervention may provide new opportunities to tackle structural issues from the bottom-up.

6. The road not yet taken

We do not pose this call lightly. Our intent is not to challenge geography's foundations, but rather to emphasize a novel way of *doing* geography. The possibility of a clinical dimension in geography is not entirely new (Rowles, 2018, Andrews and Shaw, 2008). Rather, this essay is designed to facilitate its re-emergence; to tie together, make explicit, and operationalize elements within a person-centered approach implicit in the work of geographers for many years. We believe that clinical geographers could intervene and provide support during times of precarity and change. Just as we see a doctor when sick, physical therapist when injured, psychologist when mentally unwell, realtor when buying a new house, or banker when needing to address our finances, we envision individuals consulting a clinical geographer to optimize their being in place. This includes unexpected contexts of vulnerability and change, such as relocation or returning to home and work after a stroke or natural disaster; in addition to normative lifespan situations such as having a child, retiring, or enhancing the final days of life. Our proposed clinical geography unashamedly rests on the pragmatist principle of meliorism, the belief that the world can be improved by human effort. This is an opportunity for geographers to expand their reach by focusing on the site, scale, and perspective of a person. Change is difficult and slow. We hope this call is a first step to provoke reflection, discussion, and the exercise of our geographical imagination.

Acknowledgements

We are grateful to our colleagues Drs. Malcolm Cutchin, Hillary Waters, and John Watkins, in addition to the anonymous reviewers, for their thoughtful and constructive feedback on earlier versions of this manuscript.

Funding

Dr. Finlay's efforts were supported by the Michigan Institute for Clinical & Health Research Postdoctoral Translational Scholar Program UL1 TR002240-02 and NIH/NIA Ruth L. Kirschstein National Research Service Award Individual Postdoctoral Fellowship F32 AG064815-01.

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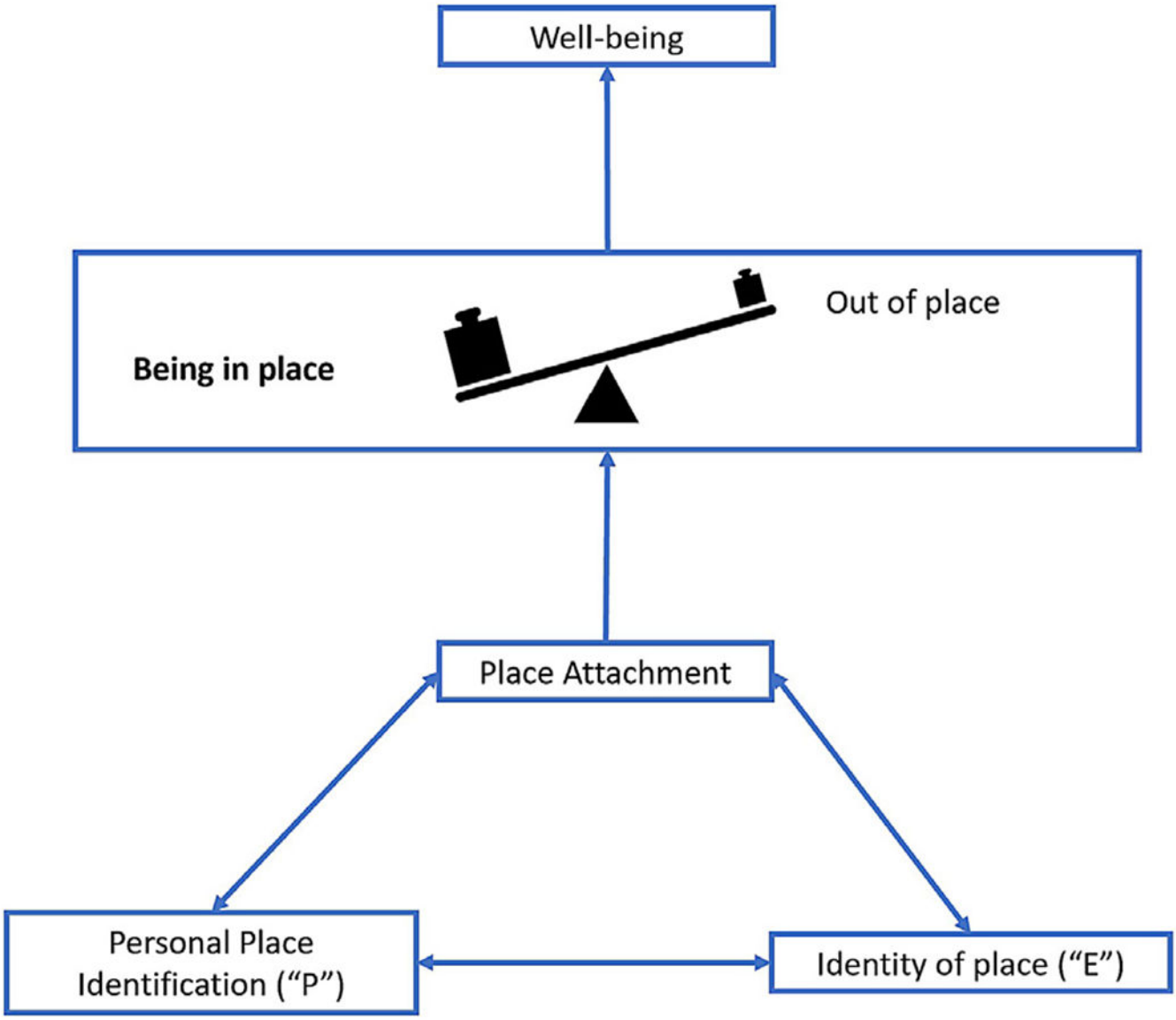

Fig. 1.
Conceptual Approach to Being in Place (adapted from Rowles (Rowles, 2018)).

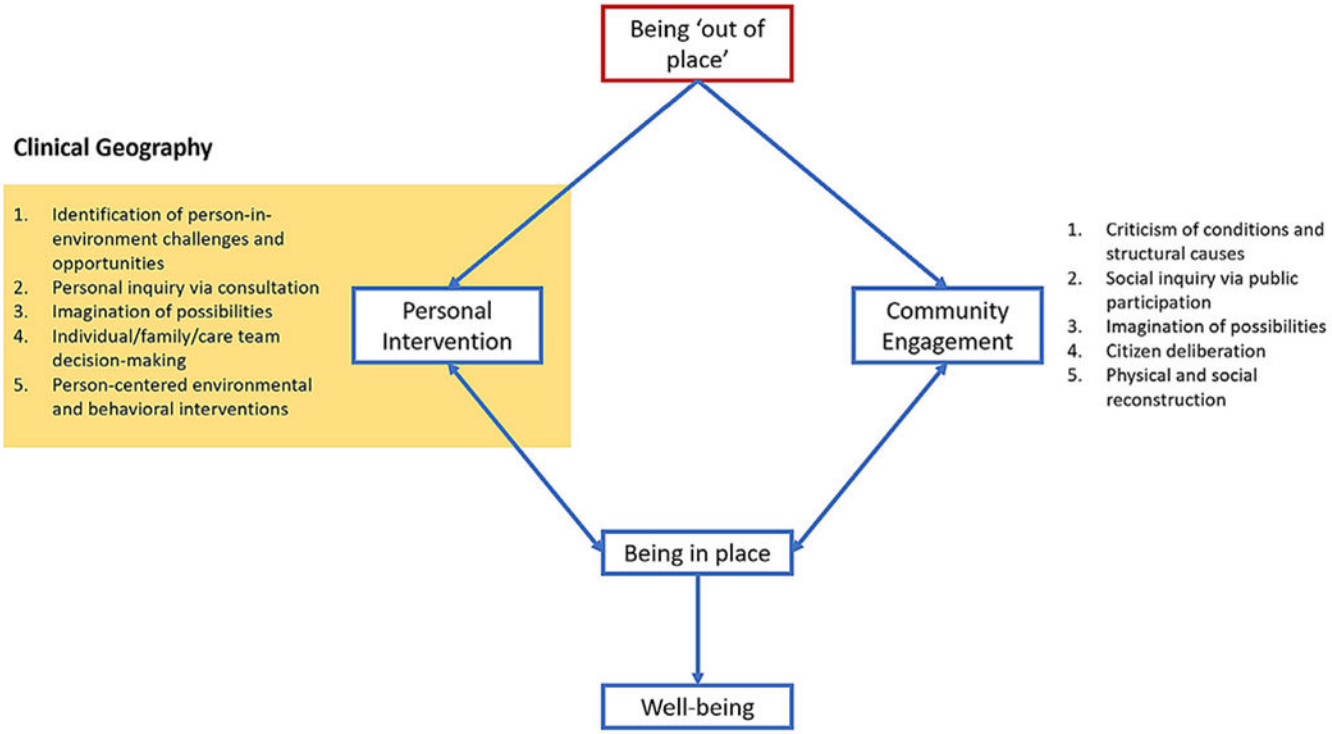

Fig. 2.
Addressing being 'out of place'.

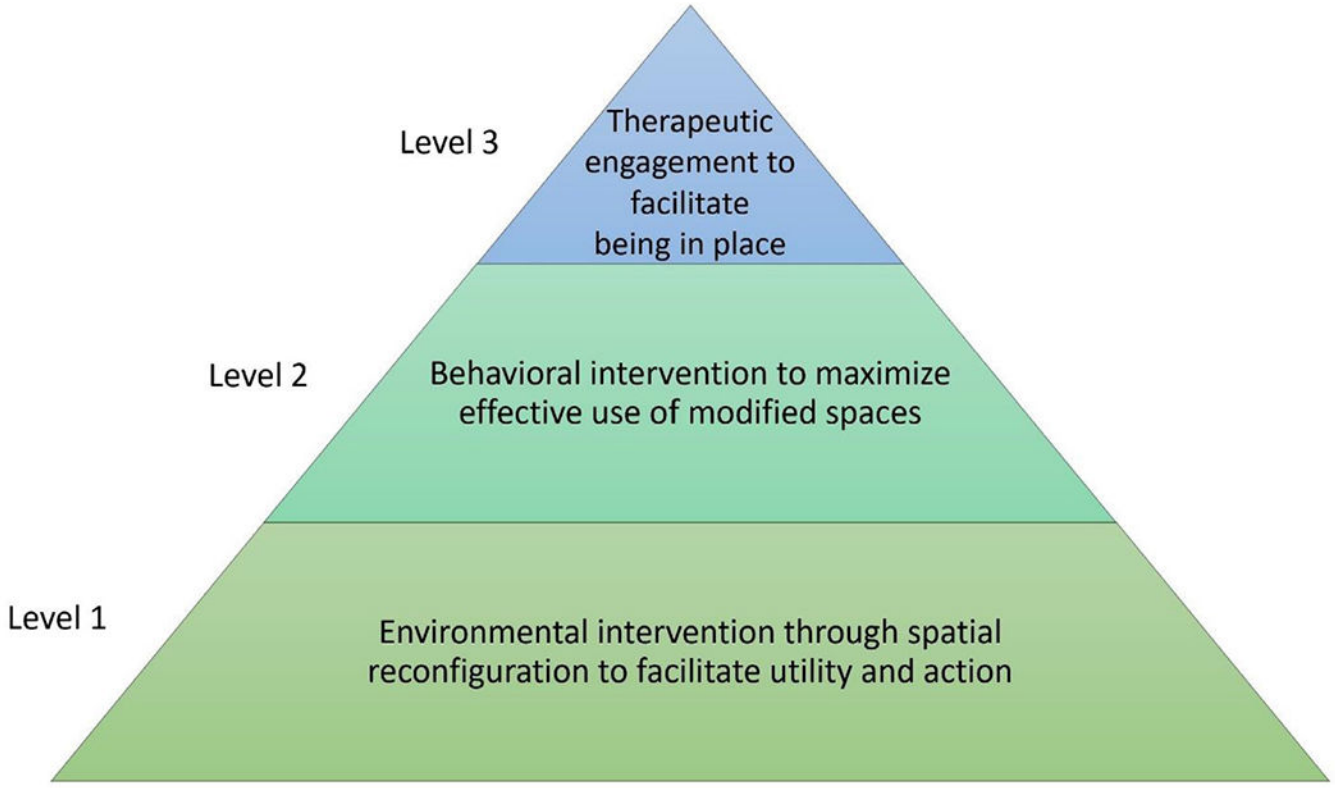

Fig. 3.
Hierarchy of Clinical Geography Intervention.