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Commentary

The data of care: Intergenerational lives between support and surveillance

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Zuzana Talašová[1,2]

Abstract

This commentary analyzes how the digitalization and datafication of informal care transform the temporal, gendered, and intergenerational dynamics of family caregiving. Technologies such as sensors, apps, and AI-driven platforms promise support and efficiency, yet they introduce new temporal regimes that redefine what counts as "good care." Building on feminist ethics of care, feminist data studies, and theories of temporality, the text argues that digital systems create a form of moral temporalization: caregivers are evaluated through their speed of response to algorithmic alerts rather than through presence or relational attentiveness. These transformations can also be situated within broader processes of value individualization, whereby responsibility for care becomes increasingly personalized, monitored, and moralized at the level of individual family members. These shifts carry social consequences. Digital care generates invisible technical and temporal labor—particularly borne by women—while reshaping intergenerational relations by granting younger, technologically skilled family members greater temporal authority over older adults. As care becomes increasingly governed by algorithmic time, the boundary between support and surveillance blurs. The commentary calls for rethinking temporality as a central ethical dimension of datafied care.

Keywords

Digitalized care, temporality, datafication, gendered labor, intergenerational relations, algorithmic governance

The digitalization of care is often presented in contemporary public debate as a solution to the growing crisis of informal caregiving—AI-driven platforms, home sensors, smartwatches, or family-coordination apps promise efficiency, safety, and relief. Yet beneath this layer of techno-optimistic enthusiasm lies a profound transformation of the very substance of care. The datafication of informal care affects not only what information about care becomes available, but more importantly, what time of care we live. Algorithmic systems introduce new rhythms, intervals, and response times that reshape caregivers' moral responsibility and reconfigure intergenerational relations. This commentary argues that temporality is an often overlooked—yet crucial—dimension through which technologies transform the gendered, intergenerational, and moral organization of family care. The commentary develops this argument through three interconnected analytical dimensions: (1) algorithmic time as a form of moral governance, (2) gendered temporal labor that sustains datafied care infrastructures, and (3) intergenerational temporal authority that redistributes power within families. Conceptually, I use "moral temporalization" as an umbrella term to describe how timing becomes morally evaluative in datafied care, while the three dimensions above refer to analytically distinct but interconnected manifestations of this process rather than separate theoretical frameworks.

While similar dynamics of moral temporalization can also be observed in formal and institutional care settings, this commentary focuses on informal family care because it is typically less bounded by formal schedules, labor contracts, or institutional accountability. In informal care, responsibility is moralized as personal and relational, expectations of availability are diffuse and ongoing, and temporal pressures are more easily naturalized as expressions of love or obligation. These

[1]Department of Sociology, Faculty of Social Studies, Masaryk University, Brno, Czech Republic
[2]Department of Management, Faculty of Business and Economics, Mendel University, Brno, Czech Republic

Corresponding author:
Zuzana Talašová, Department of Sociology, Faculty of Social Studies, Masaryk University, Joštova 10, 602 00 Brno, Czech Republic;
Department of Management, Faculty of Business and Economics, Mendel University, Brno, Czech Republic.
Emails: ztalasova@mail.muni.cz; talasova@mendelu.cz

dynamics resonate with broader processes of value individualization, in which care obligations become less collectively structured and increasingly internalized as matters of personal responsibility, moral adequacy, and self-evaluation. These features make informal care a particularly revealing site for examining how algorithmic time reshapes responsibility, inequality, and everyday moral judgment.

Building on feminist ethics of care (De La Bellacasa, 2017; Held, 2006; Tronto, 2020), theories of time (Sharma, 2014; Wajcman, 2015), feminist data studies (Engebretsen and Kennedy, 2020; Fotopoulou and Thornham, 2020), and research on algorithmic governance (Lupton, 2019; Powell, 2021), I argue that digitalized care generates a new regime of moral temporalization in which care is evaluated by the speed of one's response to data rather than by relational presence or the quality of attention. Temporality becomes a form of power—gendered, intergenerationally asymmetrical, and normalized as the "logic of technology," even though it is a deeply social phenomenon. In this sense, the "time of care" becomes a moral yardstick through which responsibility, attentiveness, and careworthiness are evaluated, not only shaping caregiving practices but also caregivers' moral identities. As a conceptual commentary, this article does not analyze a specific dataset of care technologies but synthesizes existing scholarship on digital health, monitoring, and datafication to develop an analytic lens focused on the temporality of care.

Algorithmic time of care as a form of moral governance

This section shows how algorithmic alerts, thresholds, and response times translate care into measurable temporal metrics, turning timeliness into a moral criterion of "good care." In traditional understandings of care—whether of children, older adults, or people with illness—time was anchored in embodiment and presence. I use this contrast analytically rather than nostalgically: care ethics has long emphasized care as situated, relational, and resistant to standardized measures of efficiency or optimization (Held, 2006; Tronto, 2020). Care is a moral relationship that requires attentiveness, patience, and sensitivity; it is a form of time that is neither productive nor optimizable. Held (2006) and Pulcini (2017) emphasize that the temporality of care follows a different logic than the temporality of efficiency—it is irregular, situational, and relationally dependent.

Digitalization, however, translates this time into data formats that rhythmize, measure, and predict it. Notifications, time intervals, safety thresholds, and algorithmic forecasts transform the everyday life of caregivers into a series of "properly timed" actions. Sharma (2014) describes this as temporal governance—the management of social life through temporal regimes that are presented as neutral, yet in reality distribute power.

In caregiving, this has specific consequences. When a sensor reports inactivity, the algorithm interrupts the caregiver's daily rhythm; when an app flags an "abnormality in the sleep cycle," a moral pressure to act immediately emerges. As Berridge (2016) shows, passive monitoring technologies create a regime of micro-surveillance that disrupts the everyday rhythms of both caregivers and care recipients, generating anticipatory anxiety even in situations where no actual need has arisen. And when notifications do not arrive, anxiety appears as well—as if the absence of data were itself a sign of neglect. As Powell (2021) notes, algorithmic systems produce a form of everyday moral oversight in which individuals judge themselves according to whether they respond "on time." Speed thus becomes a metric of love, responsibility, and caregiving identity.

This mechanism represents a fundamental shift. Whereas the value of care used to be associated with presence and shared time, it increasingly becomes tied to control over time and the speed of response to data. A new type of moral algorithm is emerging—used here not as a technical descriptor, but as a shorthand for how algorithmic systems embed moral expectations about appropriate timing into everyday caregiving practices: those who respond quickly are "good caregivers," while those who respond slowly are "indifferent." Temporality becomes a moral infrastructure of care (Engebretsen and Kennedy, 2020), disciplining not only what we care about but also when we care. Once timeliness becomes a moral expectation embedded in care technologies, the question arises of who is expected to absorb the resulting interruptions, vigilance, and coordination—an issue that is deeply gendered.

Gendered invisible temporality of care work

Building on this logic of moralized timing, this section argues that datafied care produces a largely invisible form of temporal labor—continuous readiness, coordination, and interruption—that is unevenly distributed along gendered lines. The digitalization of care also generates a new form of labor—invisible data work, as described by Engebretsen and Kennedy (2020) and Fotopoulou and Thornham (2020). This work includes the technical and organizational tasks that keep the digital infrastructure of care running: configuring apps, synchronizing calendars, managing notifications, overseeing data flows, or performing routine device updates. Although these activities are often perceived as minor details or as "user self-evidence," they constitute a substantial part of everyday care—time-consuming and emotionally demanding. This commentary proposes expanding this concept by adding another dimension and understanding data work also as temporal work.

The main burden lies not only in the technical tasks but in a new form of temporal responsibility generated by

technology. Datafied care presumes constant availability, the ability to respond in real time to algorithmic signals, to continuously track others' rhythms, and to monitor whether the "time of care" aligns with the system's rules. Temporality thus becomes the core of this work—it is not only about managing technologies, but about performing continuous readiness that remains unrecognized as labor while profoundly structuring caregivers' everyday lives.

Research shows that this temporal–cognitive load is distributed highly unevenly and most frequently falls on women—especially daughters, mothers, daughters-in-law, and granddaughters (e.g. Dalmer et al., 2022). As Wajcman (2015) notes, the promise of technological relief often produces the opposite effect: technologies may reduce physical effort, yet simultaneously accelerate the expected pace of care and expand responsibilities toward constant coordination, monitoring, and responding. Women who already bear emotional, organizational, and relational labor thus additionally take on digital and temporal labor.

In everyday practice, this invisible temporality manifests through small but cumulative challenges. Caregiving women monitor alerts, interrupt their own activities to respond to app signals, interpret health data and predicted risks, resolve mismatches between algorithmic rhythm and actual needs, and simultaneously "teach" older generations to use technologies so that the system can function. The moral consequences of these processes also fall primarily on them: a delayed response or missing entry easily turns into an internal sense of failure, even though it often results from technical limitations or an overload of demands.

This labor is invisible precisely because it is hidden beneath the discourse of efficiency and automation. As Fotopoulou and Thornham (2020) show, technologies shift responsibility onto users in the form of minor everyday administration without acknowledging this burden as labor. In the family context, this invisibility is even stronger, because data work is interpreted as an expression of love or responsibility, making its laborious, temporal, and gendered nature almost impossible to name. Temporality thus becomes one of the most significant—and at the same time least reflected—sites where the digitalization of care reproduces gender inequalities. Yet this temporal burden is not only gendered; it is also intergenerational, as control over care data and digital systems reshapes who is able to define when action is required.

Intergenerational asymmetries: temporality as power over others

This section examines how digital competence reorganizes intergenerational relations by granting some family members temporal authority over others' everyday rhythms, decisions, and perceived needs. The datafication of care also reshapes intergenerational relationships. Whereas care-related power used to be tied to physical presence—who can come, who can help—it is now tied to digital competence: who has access to data, who understands the app, who can interpret the information. This shift produces an asymmetry (Berridge and Wetle, 2020) that is not only informational but also temporal.

Younger generations, who master the technologies, acquire temporal authority: they determine when it is "time to act," how frequently monitoring should occur, and how to interpret the rhythms of the person receiving care. Older generations, by contrast, often become objects of the digitalization of their own time—their everyday life is monitored, rhythmized, and translated into data points. This generates a new kind of dependency: a dependency on a tempo they do not set themselves.

This can lead to disruptions of trust and autonomy. Studies in digital health show that seniors may experience constant monitoring as a "densification" of time, one in which they find themselves under subtle yet continuous surveillance (Dalmer et al., 2022). Intergenerational care may, in some contexts, take on a more vertical and supervisory character, particularly where control over data and alerts is unevenly distributed.

This asymmetry is not technologically inevitable. It emerges where control over data is concentrated within one part of the family. Digital temporality thus functions as a tool for governing another person's time—a form of governance masked as care. These intergenerational dynamics help explain why the same care technologies can be experienced as supportive coordination in some families and as intrusive surveillance or discipline in others.

Ambivalence between support and surveillance

The ambivalence of digitalized care is not merely a simple tension between support and surveillance. It is a clash between two distinct temporalities of care: relational time and algorithmic time. Throughout this commentary, surveillance is not treated as a fixed or total condition but as part of a continuum in which the same temporal infrastructures can enable coordination and attentiveness while simultaneously producing monitoring and discipline. As Lupton (2019) notes, care technologies are never unambiguous—their effects depend on the tempo they introduce into family relationships, a tempo that can either hold families together or discipline them. The same tools can thus simultaneously facilitate and control, strengthen solidarity and undermine autonomy.

In many families, technologies indeed provide relief. In many cases, these tools supplement rather than replace embodied presence, enabling coordination across distance without eliminating face-to-face care. Shared calendars create clarity, sensors help prevent risks, apps distribute the caregiving load across multiple family members, and digital communication channels can reduce the isolation of older

people. In such situations, technologies support a shared temporality that enables family members to coordinate care without constant organizational chaos. Here, data become an infrastructure of attentiveness rather than a tool of control.

Yet this support exists alongside an opposite effect: algorithmic temporality begins to define norms of care that may be more rigid than the actual needs of the person receiving care. As Powell (2021) shows, algorithmic systems generate implicit expectations of correct timing—whether the "ideal" monitoring interval, the frequency of checks, or the immediacy of response to a notification. These temporal norms quickly become moral norms: those who respond quickly are responsible; those who respond slowly are failing.

From the perspective of the sociology of time, this is what Sharma (2014) calls the colonization of time: algorithmic rhythm penetrates the intimate sphere and rewrites the relational temporality of care through its logic of prediction, calculation, and reactivity. Adams et al. (2009) point out that modern technologies create a state of continuous present in which individuals are constantly interpellated by demands for immediate response. In the context of care, this mechanism takes on a moral dimension: family relationships are drawn into a regime of micro-surveillance in which attentiveness is replaced by vigilance, and presence is replaced by notification-driven discipline.

This process also has relational consequences. Research on digital eldercare shows that older adults may experience a loss of autonomous time—their daily rhythms are interpreted through data rather than through their own lived experience (Dalmer et al., 2022). Care thus becomes asymmetrical: younger, technologically competent family members hold temporal power, while older generations find themselves in the position of a digitalized object whose temporality is monitored and evaluated.

The ambivalence of digital care is therefore not merely about whether technology supports or surveils, but about whose logic of time prevails in care. When rhythm is set by people—by family, needs, and relationships—technologies can strengthen solidarity. When rhythm is set by the algorithm, technologies often reproduce or deepen existing inequalities. The key question is thus not whether a technology is "good," but who has the authority to determine the tempo of care—and who bears the consequences when that tempo cannot be met. These moralized temporal norms do not affect caregivers equally: they intensify gendered expectations of availability and emotional responsibility while simultaneously reorganizing intergenerational relations by privileging those who control data, alerts, and timing.

Conclusion

Digitalized care today functions not merely as a technical aid but as a subtle regime of temporal governance. Algorithms generate new moral norms, set the pace of response, and reshape relationships that were once grounded in presence, slowness, and sensitivity to the needs of others. Temporality thus becomes one of the central sites where technologies not only support but also discipline—often in ways that remain invisible, yet deeply shape the everyday experiences of both caregivers and care recipients. What is at stake is not merely efficiency or coordination, but the moral redefinition of what it means to care well in conditions increasingly governed by algorithmic time.

This form of temporal governance simultaneously reproduces existing inequalities. The algorithmic rhythm of care disproportionately impacts women, who carry the bulk of invisible temporal labor, and reinforces intergenerational asymmetries in which digital competence determines who holds power over another person's time. Care can thus shift into a mode of control—not because of malicious intent, but because technologies naturalize their own temporal norms as neutral and self-evident.

If digitalization is to genuinely support family care rather than undermine its relational nature, it is necessary to rethink both the foundations of technological design and the societal expectations attached to caregiving. The key issue is not merely what data are collected, but according to whose logic of time care is organized, and who bears the consequences when this tempo is disrupted. Rethinking the temporality of care means opening space for technologies that respect relationality, shared control, and the diversity of life rhythms—technologies that do not transform care into silent, everyday surveillance. Such re-evaluation is essential if digital technologies are to become true instruments of solidarity rather than invisible mechanisms of discipline. Future research and practice must therefore take temporality seriously—as a key ethical, social, and political dimension of datafied care.

ORCID iD

Zuzana Talašová https://orcid.org/0009-0000-9378-3814

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