Role Strain among Dual Position Physical Educators and Athletic Trainers Working in the High School Setting

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Abstract

Many physical education teachers are hired with the expectation that they fulfill an extra-curricular role. Those who are dual position physical educators and athletic trainers may be exposed to many accumulating occupational pressures. The purpose of this mixed methods study, therefore, was to identify the extent to which role strain permeates the professional lives of dual position physical educators and athletic trainers working in the high school setting and to identify which components of role strain (i.e. role ambiguity, role conflict, role incompetence, etc.) are most prevalent and which variables predict role strain. We also sought to gain insight into the processes involved with the development and prevention of role strain. A survey was sent to 1,863 individuals who were certified teachers and athletic trainers working in the high school setting regarding the extent to which participants experienced role strain (1=never to 5=nearly all the time). The survey had a 31% response rate and 257 matched the criterion of being full time physical educator and athletic trainer working in the high school setting. Results revealed that 35 (13.6%) had high role strain, 72 (28.5%) had moderate role strain, 85 (33%) had low role strain, and 64 (24.9%) had minimal role strain. The regression analysis revealed only hours worked per week as an athletic trainer predicted total role strain. Twenty four volunteers participated in interviews. The qualitative data revealed that the time consuming nature of the dual role was a critical concern amongst the participants. Having a level of support and appreciation was found among individuals with lower levels of role strain. Individuals with lower levels of role strain tended to negotiate their role responsibilities with coaches and supervisors, whereas those with higher levels of role strain tended to accommodate all work-related constituents as much as possible. Low levels of role strain were most common amongst dual position physical educators and athletic trainers working in the high school setting. Hours worked per week as an athletic trainer was a predictor of one's total role strain and role overload was a substantial concern amongst the participants. The research findings provide an awareness of role strain and the factors that influence it within the teaching and athletic training context.

Many secondary schools have hired individuals as teachers with the expectation that they also fulfill the role of athletic trainer. Teaching is a demanding profession requiring the instruction of five or more classes per day, conducting committee work, as well as other assigned duties (Sage, 1987). Athletic training is also a demanding profession that requires individuals to deal with multiple responsibilities (e.g. patient care and administration), limited resources, and high patient volume (Hendrix, Acevedo & Hebert, 2000). The athletic trainer must often attend both games and practices throughout the course of an academic year with little or no break from one season to the next. Expecting one person to fulfill two roles can potentially lead to a great deal of role stress and strain.

Role strain is "a subjective state of emotional arousal in response to the external conditions of social stress" and occurs when "role obligations

are vague, irritating, difficult, conflicting, or impossible to meet" (Hardy & Hardy, 1988 p. 165). The sources of role strain are categorized as role conflict (subcategorized as interrole conflict, intersender conflict, and intrasender conflict), role ambiguity, role overload, role incongruity, and role incompetence (Hardy & Hardy, 1988). Each source or component of role strain is further explained in table 1.

Many predictors of role stress and strain have been identified including work load, age, experience, and lack of social support (Chang, Hancock, Johnson, Daly, & Jackson, 2005). Gender has also been identified as a factor related to role stress (Gigliotti, 1999). The negative outcomes of role stress and strain consist of work dissatisfaction, low self-esteem, tension or anxiety (Conley & Woosley, 1999), propensity to leave an organization (Mobily, 1991) poor teaching (Aicinena, 1999), and burnout (Capel, 1986). Researchers have examined role strain resulting from the multiple demands involved with serving single roles such as teacher (Conley & Woosley, 2000), academic dean (Wolverton, Wolverton, & Gmelch, 1999), department chair (Gmelch & Burns, 1994), as well as role strain resulting from dual roles such as teachers and coaches (Sage, 1987) and nurse clinical faculty (Mobily, 1991; Oermann, 1998).

The American Medical Association has suggested that the prevention and care of high school athletic injuries is a significant health issue and athletic trainers are needed to recognize and manage injuries that occur to this population (Lyznicki, Riggs & Champion, 1999). Therefore, more high schools may consider hiring teachers who are certified athletic trainers (possess the ATC® credential) in order to fulfill dual responsibilities. Given the relationship between athletic training, physical education, and sport, it is reasonable that many athletic trainers holding dual positions may teach physical education. Indeed sport and physical education coalesce to form a context where physical education teachers are often expected to maintain dual roles that tend to result in mounting occupational pressures (Jones, Potrac & Ramalli, 1999) which may lead to role strain.

The purpose of this mixed methods study was threefold. First, to identify the extent to which role strain permeates the professional lives of dual position physical educators and athletic trainers working in the high school setting. Second, to identify which components of role strain (i.e. role ambiguity, role conflict, role incompetence, etc.) are most prevalent and examine the variables that may predict total role strain. And third, to gain insight and understanding about the processes involved with the development and prevention of role strain. The following research questions guided our study: 1) To what extent do dual position physical educators and athletic trainers in the high school setting experience role strain? 2) What component(s) of role strain tend(s) to be most prominent among this population? 3) What variables (i.e. gender, years of work experience, work hours, etc.) predict role strain? 4) By what processes and in what ways do physical educators and athletic trainers experience and deal with role strain? 5) In what way does the school context influence the development or prevention of role strain? and 6) What are the perceived influences of role strain on teaching and athletic training responsibilities?

Methods

Participants

To find individuals who were employed in a dual position as a physical educator and athletic trainer, we worked with the NATA member services to identify 1,864 certified athletic trainers who indicated they held a teaching certificate and worked in the high school setting. One potential participant was not included because of an international address.

Instrumentation

We obtained permission to adapt Mobily's (1991) Role Strain Scale. The scale was adapted

Table 1.

Components of Role Strain

Component	Definition
Role Conflict	Role expectations are clear but compete with one another and/or are incompatible.
Intersender Role Conflict*	A situation whereby one individual's demands conflict with the demands of another within a role set. Example: A dual position teacher and athletic trainer feeling unable to meet the demands of a department chair and athletic administrator.
Intrasender Role Conflict*	The demands one feels in a given role are incompatible. Example: Feeling pressure as an athletic trainer to be thorough with rehabilitation procedures, prepare for practice, communicate with coaches, etc without adequate time to do so.
Interrole Conflict*	A situation when an individual must enact different roles simultaneously and the requirements and demands of one role conflict or run counter with the demands of another role. Example: feeling as though the athletic training role takes away time that is needed for teaching activities.
Role ambiguity	The expectations or demands associated with a professional role are unclear or vague. Example: Feeling a lack of clarity with respect to how one will be evaluated in his/her role as a dual position teacher and athletic trainer.
Role Overload	The role expectations are too complex, too demanding, or too time consuming for the time and energy an individual has available. Example: Having job expectations that require one to work well beyond "regular" hours and tap into personal time to complete tasks.
Role Incongruity	The expectations and/or demands of a professional role are incompatible with the individuals disposition, attitude, values or beliefs. Example: Feeling as though the goals and attitude of the athletic department are not consistent with one's own attitude.
Role Incompetence	The person in the role does not have the necessary skill or knowledge to perform the role. Example: feeling as though the knowledge level one has is not enough to complete required role expectations.

*Each are considered a subset of role conflict
Sources: Oermann (1998); Mobily (1991); Hardy & Hardy (1988)

by modifying the language to make it relevant to athletic training and physical education. The Role Strain Scale has 44 items and provides scores for seven subscales as well as a total role strain score.

Each item on the survey assessed the degree to which work situations were a source of strain by using a Likert-Like scale (1=never, 2=rarely, 3=sometimes, 4=frequently, and 5=nearly all the time). The scale's content validity and reliability have been established; the internal consistency of the original scale, as measured by Cronbach's alpha was .96 (Mobily, 1991) and a modified version of the scale was .93 (Oermann, 1998).

The total role strain score identifies the degree of role strain experienced by individuals using the following mean values: 1) High Role Strain (HRS)—3.5 or higher; 2) Moderate role Strain (ModRS)—3.0-3.49; and 3) Low Role Strain (LRS)—2.5-2.99; and 4) Minimal Role Strain (MinRS)—lower than 2.5. These categories are consistent with those used by Mobily (1991) and Oermann (1998).

Procedures

Given the twofold nature of the study's purpose, a mixed methods (quantitative and qualitative) design was used. Phase one of our study focused on answering research questions 1-3 and utilized a survey method and the aforementioned instrument. Phase two of the study focused on answering questions 4-6 and used in-depth interviews with purposefully selected participants.

In phase one, 1000 of the 1863 invitations were sent via e-mail. This was the allowable number of e-mails that could be sent through the NATA and was done so to curtail mailing costs. The e-mail contained a link to an on-line version of the survey. The remaining 863 individuals received an invitation letter, survey, and pre-paid addressed envelope via regular mail. Follow-up reminders were completed with both groups approximately 3 weeks post mailing.

The end of the survey contained an invitation for individuals to voluntarily participate in phase two of the study which involved personal interviews. Those individuals who were interested in volunteering for this phase were instructed to include contact information. We then identified potential interview participants and selected our sample. A total of 152 individuals agreed to participate in phase two. In selecting interview participants, we purposefully identified individuals from each of the HRS, MRS, LRS, and MinRS group. The selection of participants from those who volunteered was partially dependent on logistics in that the days and times that the participants were available for a phone interview had to match the availability of the research team members. A total of 24 interviews (23 over the phone and 1 in person) were conducted, representing 15.7% of those who volunteered for this phase. Five participants were in the HRS group, 8 were in the ModRS group, 1 was in the LRS group, and 10 were in the minimal role strain group. All aspects of the study received appropriate institutional review board approval prior to data collection.

Several strategies were used to ensure trustworthiness of the qualitative findings. First, multiple analyst triangulation helped to clarify the interpretation of the data and verify the themes in which coded concepts were placed. Second, member checks were performed with participants from each interview group to determine that the findings were reasonable based on their experiences they shared with us during the initial interviews.

Data Analysis

Descriptive statistics were used to determine the participants' level of perceived role strain and to identify which component(s) of role strain tended to be most prominent among the participants. A linear regression analysis was used to examine the predictors of role strain.

The qualitative data obtained during phase two of the study was analyzed inductively using

grounded theory methods (Strauss & Corbin, 1998). Trustworthiness of the qualitative data was established with participant member checks and multiple analyst triangulation (Creswell, 1998).

Results

A total of 243 regular mail surveys were returned out of the 863 sent for a return rate of 28.1%. The electronic survey garnered 334 responses from the 1000 sent, for a response rate of 33.4%. Overall, a total of 577 of the 1863 participants completed surveys were returned for a 31% overall response rate. Of these 577 respondents, 257 matched our desired profile of being a dual position full time physical educator and athletic trainer working in the secondary school setting. Not every individual reported complete demographic data. The participants included 94 (36.6%) females and 158 (61.4%) males. The participants' average age was 36.7 (±8.3). The average years of experience in the dual role were 10.4 (±7.8) years with a range from 1-32 years. Additional demographic data from the participants are displayed in table 2.

In order to clarify the reliability of the role strain inventory, Chronbach's alpha coefficients were calculated to determine internal consistency. Acceptable reliability coefficients were achieved for each subscale and ranged from .73 to .88.

Perceived Role Strain

Table 3 presents the amount of perceived total role strain amongst the participants. Descriptive statistics revealed that nearly 60% of the participants perceived low/minimal levels of role strain.

Table 4 presents the means and standard deviations for each of the components of role strain. These data reveal that role incongruity, role overload, and interrole conflict are the most prominent components of role strain.

Correlations were conducted as a preliminary analysis to the linear regression. The correlations ranged from -.021 to .352. The only significant correlation was between hours worked per week

Table 2.

Participant Demographic Data

Demographic	n	%
Sex		
Female	94	36.6
Male	158	61.5
Unspecified	5	1.9
Highest Degree Obtained		
Bachelors	85	33.1
Masters	167	65.0
Specialists	4	1.6
Doctorate	1	.4
Average Hours Per Week Worked as an ATC		
0-5 hours	2	.8
6-10 hours	7	2.7
11-15 hours	6	2.3
16-20 hours	39	15.2
21-30 hours	113	44.0
31-40 hours	49	19.1
41 or more hours	40	15.6
Not reported	1	.4
NATA District		
1	14	5.4
2	50	19.5
3	38	14.8
4	55	21.4
5	11	4.3
6	22	8.6
7	15	5.8
8	16	6.2
9	17	6.6
10	7	2.7
Not Reported	12	4.7

Table 3.

The Prevalence of Minimal, Low, Moderate, and High Role Strain Amongst Dual Position Physical Educators and Athletic Trainers

	Minimal	Low	Moderate	High
Mean Role Strain Inventory Categorization	<2.5	2.5-2.99	3.0-3.49	≥ 3.5
Frequency	64	85	72	35
Percentage	24.9	33	28.5	13.6

Table 4.

Sources of Role Strain

Sources of Role Strain	Mean rank	Mean	SD
Role Incongruity	1	3.65	.89
Role overload	2	3.44	.72
Inter role conflict	3	3.23	.77
Intra sender conflict	4	3.06	.63
Inter sender conflict	5	2.77	.79
Role Ambiguity	6	2.33	.81
Role Incompetence	7	1.84	.64

and role overload. The linear regression analysis revealed that neither gender nor years of experience were significant predictors of role strain at any level. The hours worked per week in athletic training role was the only significant predictor ($p<.05$) with a positive β—coefficient (.21) to total role strain. Further examination of the work hours in athletic training revealed increasing mean role strain scores with increased hours worked per week as an athletic trainer (see table 5).

Qualitative Findings

Four categories emerged from the inductive analysis: 1) Time-related Issues, 2) Role Relationships, 3) Support & Appreciation, and 4) Role Clarification/negotiation vs. Role Accommodation. Each category is presented below along with supporting data.

Time-related Issues.

Regardless of one's level of role strain, the participants indicated that time-related issues impacted their role as a teacher and athletic trainer. The time-related issues were associated with the high work hours per week and the structure of the teaching role in relation to athletic training coverage demands. For example, one participant commented that the total hours at work:

Table 5.

Hours per Week in Athletic Training Role and Mean

Role Strain Score

Hours/Week in Athletic Training Role	n*	Percentage	Mean Role Strain Score	SD
0-5	2	.78	1.4	.305
6-10	7	2.73	2.4	.69
11-15	6	2.34	2.7	.73
16-20	39	15.23	2.8	.46
21-30	113	44.14	2.8	.60
31-40	49	19.14	2.9	.63
41 or more	40	15.62	3.0	.53

* one participant did not report hours (n=256)

> …was the major stressor …I think the time is the thing. I mean, if you're trying to put in or have a healthy life, you've got to be able to balance obviously your life, whether it be work, your family…outside life but … what I don't like seeing about the athletic training profession is that too many people are expecting [exorbitant work hours and think that is] what the profession is and if you don't like it, then don't do it. And I used to have that mentality too until you realize your life changes.

The same participant commented on the average work week and said "Basically, I was working on average … 60 to 75 hours a week for 10 months out of the year, the school year basically, which started say, with pre-season football, starting at the end of July through the end of May" With respect to time issues, the structure and organization of the day was also identified as a problem. For example, one participant stated "obviously, the school day ends at 2:55. The coaches want their kids out at practice at 3:10 so that gives me 15 minutes to get everything done…you get about 15 minutes to do [everything]–evaluate an injury, tape kids, take care of wounds…". A different participant indicated that in a dual role there was more to do than time to do it: "…you constantly go from one thing to the other. It's the time factor…you never, I never feel like I get everything [completed]…there's always something left undone".

Role Relationships.

The category "role relationships" provided insight about how one role impacts the other. Evidence provided examples of both positive and negative influences of the roles. In some instances, for example, the athletic training role interfered with the teaching role as explained by one participant:

> …I've brought my classes to the [athletic] training room to sit in the hall while I'm getting teams out on the road because I couldn't get coverage or [the team was] leaving especially early and that impacts on the Physical Education classes and there's no clear division of teacher/ athletic trainer. It's teacher—sometimes [athletic] trainer—sometimes teacher.

The level of interference varied amongst the participants, but other examples included having coaches or students show up during the school day with questions about an injury or player status, or students expecting treatment when the academic role needed to be addressed. For example, one participant described her typical day:

> [The] typical day could begin with an unexpected athlete coming in [during] the morning before the bell rings [or] before classes begin. And here where I teach athletic trainers are extra duty on top of teaching so really the duty begins, or kind of existed all day but the 'actual' duty didn't start until after school but it doesn't mean we didn't have people coming in before [or] during school.

Other examples of this role relationship included having to use planning periods or lunch breaks during the school day to take care of athletic training needs.

The results in this category, however, offer an interesting paradox in that despite evidence of interference, each of the roles has the capacity to compliment or enhance one another. One participant stated, for example, that because of her dual role "I think they (the athletes) already trust me and I see a lot more of them than I do some of the athletes that might be injured. But I think they trust me more and I think they, you know, they have a pretty good understanding of what I do and how I can help."

Support & Appreciation.

Those who experienced less role strain tended to discuss administrative support (i.e. an understanding administrator, or at least one who listens and tries to work with the athletic trainer) as a factor that helped to curtail the stress and strain of their job. Those who experienced more role strain tended to discuss lower levels of administrative support. For example, one participant with low levels of role strain discussed how the administration provided support and recognized the time commitment:

> They [the administration] understand our role as [athletic] trainers as being very difficult and time consuming and very stressful so they help us in our—on our campus—they help us out a lot by trying to reduce our class loads and also our class schedule as much as they can…So they really try to help us out and they try to take care of us.

Also, social support was a critical aspect of experiencing lower role strain. Those who experienced less role strain tended to indicate higher levels of social support in the form of an understanding spouse, partner, or family; or even a network of colleges to interact with and share experiences. One participant explained the support received from colleagues:

> Well, from colleagues I receive an extreme amount of support. I have a lot of teachers that I work with; they now understand what I do and they will cover classes any time that I need them to be covered. They think that I'm crazy for what I do because teaching is a full time job in itself and I receive a lot of support … they know how many hours that I put in [each] week and they, that's where most of my support comes from and it is a very high support system.

Role Clarification/Negotiation vs. Role Accommodation.

An examination of the qualitative data revealed an interesting pattern. Individuals with less role strain tended to proactively clarify/negotiate their role, while those with higher role strain tended to engage in role accommodation.

Role clarification refers to the participants being proactive in clarifying their role with administrators and coaches in order to make clear what they were able and qualified to do, as well as what they had time to do. Role clarification was

a more prominent finding amongst those with lower levels of role strain. One participant described the role clarification process:

> …you can't be everything to everybody so you have to draw some parameters for yourself and be realistic in what…you can do. Never give up trying to be pro-active for yourself. Don't accept that…[the coaches and administration] want you to work 20 hours in a 24 hour day. Seek out ways that you can get yourself some help.

Another participant explained that he sought to clarify his role with the administration in order to protect his time:

> You're a valuable part of the school environment. But the thing is you have to have time to do both jobs and don't assume any other jobs like equipment manager and things like that. You're a medical professional. You don't wash uniforms. You don't hand out spikes and so on.

Role clarification was also an aspect of the advice participants would give to someone about to assume a dual role. One participant stated; "The main advice is…[that] people [should] understand exactly what you do and that you make sure that you…have in writing exactly a contract basically for the athletic training [role] and that it's separate from the teaching and it's not the same."

Those experiencing more role strain tended to provide data that indicated more role accommodation. Role accommodation refers to individuals being very accepting in their roles to meet the demands of others (coaches/administrators). Perhaps another way to describe this theme is a "grin and bear it" attitude in that some participants knew the consequence of accepting responsibilities would be added stress and strain, yet they found it difficult to say "no." One participant explained it this way: "…how I dealt with [stress] was just try to be the best professional I could, you know, keeping a smile on when I …might not have always meant it." Another participant stated:

> Well, like I said, a smarter man than me once said something like this: 'You deal with the things as best you can and, you know, you can only change the things you can change, you can't change the things you can't change' and just, you know, walk away from that at the end of the day…I know some people get an ulcer over it.

Discussion & Implications

The first purpose of the present study was to identify the amount of role strain perceived by physical educators and athletic trainers in the high school setting and to identify the most prevalent components of role strain. Our findings suggest that the majority of participants perceived low/minimal level of role strain, though just over 40% experienced either high or moderate levels of role strain. An examination of the components of role strain revealed that role incongruity, role overload, and role conflict were most prominent. Role incongruity means that that the goals of the organization in which an individual finds himself/herself run counter to the personal goals he/she may have. The role overload identified by participants suggests that the expectations set for the participants make high demands of time and energy they have available. Lastly, the expectations of the job roles may be clear, but rather incompatible with one another. These findings are similar to Mobily (1991) who found role overload and role conflict were major role problems for nurse faculty. Similar results in the nursing profession were published by Oermann (1998) who reported role overload (heavy workload) and role conflict (being unable to satisfy demands from various work-related stakeholders).

The identification of role overload as a prominent component of role strain is consistent with the findings published by Sage (1989) who found role overload as a key issue with teacher/

coach positions. The issue of role overload was evident in our findings based on the role strain questionnaire, but was further supported by our qualitative findings. Hours of work per week as an athletic trainer, which is in addition to a full-time teaching load for the participants, was a predictor of role strain. In triangulating our findings, we believe this corroborates with the emergent category that identified time-related issues as a substantial concern with the dual position. The majority of participants worked 21 hours or more per week as an athletic trainer. Administrators and/or supervisors should be aware of the time commitments and how this is a factor related to perceived role strain and create humane schedules that consider the volume of hours worked.

The prevalence of role conflict, particularly interrole conflict, among the participants in our study compares to the findings of Sage (1989) who found role conflict as a problem with dual position teachers and coaches. Sage found evidence of interrole conflict whereby one set of role expectations (teaching) were incompatible with those of another role (coaching). He provided qualitative evidence, for example, to suggest that the teaching role can suffer due to the dual role as a coach. We too found evidence of how the teaching role is interfered with by the athletic training role; though it was also clear that the dual position can be beneficial with respect to interacting more with students.

Role ambiguity and role incompetence had low mean role strain scores which indicate that the job expectations are clear and individuals felt prepared for their roles with respect to the knowledge, skills and abilities required. The qualitative findings revealed a pattern, however, that participants experiencing lower role strain clarified or negotiated their role with administrators and coaches in order to manage the tasks required of them. Those experiencing higher levels of role strain were accommodating in their roles, attempting to complete all the tasks asked of them. We speculate that negotiating role expectations and responsibilities likely resulted in paring down the time commitment to complete the role requirements whereas accommodation can indeed lead to more responsibilities to attend to without an increased amount of time to complete them. As future physical educators and/or athletic trainers consider dual positions, they should consider negotiating job roles and clarifying expectations ahead of time. Administrators hiring employees for dual position roles should strive to create clear job descriptions and consistently review these with employees to adjust them as necessary. Such actions can likely facilitate discussion of the role stress/strain that may result and allow an individual to negotiate the work environment.

Those athletic trainers experiencing less role strain tended to identify higher levels of support and appreciation in their role. This is consistent with Chang, Hancock, Johnson, Daly, & Jackson (2005) who found that social and peer support can help mitigate role stress.

Limitations and Future Directions

This study did not seek to identify the role orientation of individuals in relation to their perceived strain. Role orientation refers to which role (teaching or athletic training) would be perceived as the dominant role. There may be a difference in perception of role strain in instances where teaching is the dominant role and athletic training is the non dominant or vise versa. Future studies should consider the relationship between role strain and role orientation. Another limitation is that we did not have participants report the number of teaching contact hours. It is reasonable that some participants may have had adjusted schedules and/or release time to perform athletic training responsibilities, yet still be considered full time teachers.

Conclusion

Low levels of role strain were most common amongst dual position physical educators and athletic trainers working in the high school

setting. Hours worked per week as an athletic trainer predicted one's level of role strain. Of the many components of role strain, role incongruity, role overload, and role conflict were more prominent amongst the participants; while role ambiguity and role incompetence were less prominent components of role strain.

Participants indicated that time-related issues were a major concern. That is, it became apparent that individuals were challenged with trying to find time to adequately attend to the expectations of both the teaching and athletic training role. Indeed the qualitative findings provided evidence that one role could interfere with the other; though there is also evidence that one role can positively impact the other. Those athletic trainers experiencing less role strain tended to identify higher levels of support and appreciation for their role, as well as an ability to clarify or negotiate their responsibilities with coaches and supervisors.

Future dual position athletic trainers and physical educators, as well as their supervisors, must recognize the substantial time commitment required to execute both roles and understand that the role overload can negatively impact the execution of the various roles required of each position. Consideration should be given to create adequate support networks and the opportunity for those in a dual position to negotiate their responsibilities, particularly the structure and function of the work environment.

Acknowledgements

This project was supported by a grant from the Illinois Association for Health, Physical Education, Recreation, and Dance. We would like to thank each of the participants who allowed us to interview them during their busy schedules.

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